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# SMITHSONIAN INSTITUTION

Fiscal Year 1978

Justification of Estimates of Appropriations  
To the Office of Management and Budget



ADMINISTRATIVELY CONFIDENTIAL

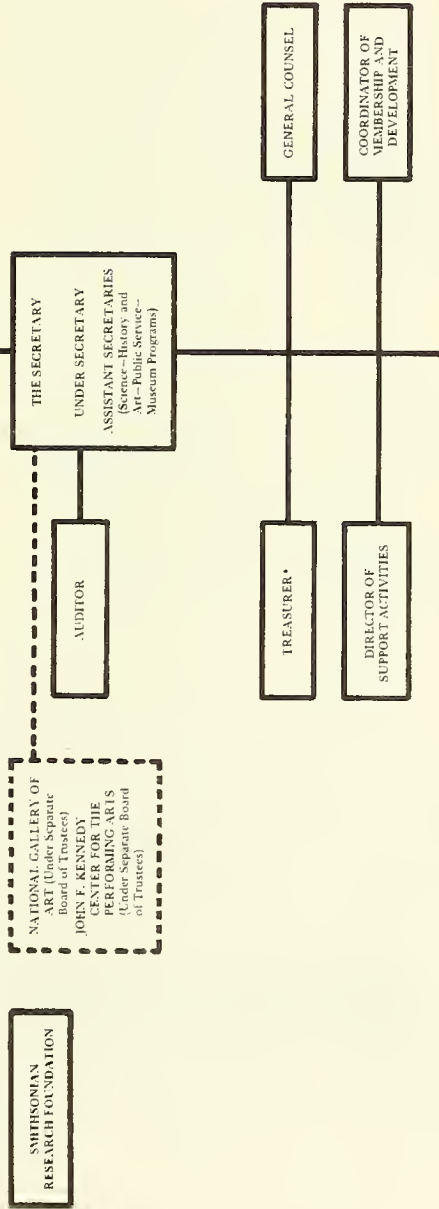
(Information not to be released until after the President's  
Budget is submitted to the Congress in January 1977.)

September 1976



# SMITHSONIAN INSTITUTION

## BOARD OF REGENTS



## BOARDS AND COMMISSIONS

Advisory Board of the Cooper-Hewitt Museum of Decorative Arts and Design  
Advisory Council for the National Museum Act  
Archives of American Art Board of Trustees  
Freer Visting Committee  
Hirshhorn Museum and Sculpture Garden Board of Trustees  
National Air and Space Museum Advisory Board  
National Armed Forces Museum Advisory Board  
National Board of the Smithsonian Associates  
National Collection of Fine Arts Commission  
National Portrait Gallery Commission  
Smithsonian Council  
Smithsonian Foreign Currency Program Advisory Councils  
Smithsonian Science Information Exchange Board of Directors

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**\*FINANCIAL SERVICES**  
Accounting  
Business Management  
Belmont Conference Center  
Product Development Program  
Smithsonian Museum Shops  
Grants and Insurance Administration  
Investments Accounting Division  
Programming and Budget

## SCIENCE

Center for the Study of Man  
Chesapeake Bay Center for Environmental Studies  
Fort Pierce Bureau  
National Air and Space Museum  
National Museum of Natural History  
Smithsonian Oceanographic Sorting Center  
National Zoological Park  
Office of International Programs  
Radiation Biology Laboratory  
Smithsonian Astrophysical Observatory  
Smithsonian Science Information Exchange, Inc.  
Smithsonian Tropical Research Institute

## HISTORY AND ART

Archives of American Art  
Cooper-Hewitt Museum of Decorative Arts and Design  
Freer Galleries of Art  
Hirshhorn Museum and Sculpture Garden  
Joseph Henry Papers  
National Collection of Fine Arts  
Renwick Gallery  
National Museum of History and Technology  
National Portrait Gallery  
Office of Academic Studies  
Office of American Studies

## PUBLIC SERVICE

Anacostia Neighborhood Museum  
Division of Performing Arts  
Office of Elementary and Secondary Education  
Office of Public Affairs  
Office of Smithsonian Symposia and Seminars  
Smithsonian Resident Associates  
Smithsonian Institution Press  
Smithsonian Magazine  
Visitors Information and Associates Reception Center

## MUSEUM PROGRAMS

Conservation Analytical Laboratory  
National Museum Act Programs  
Office of Exhibits Central  
Office of Museum Programs  
Office of the Registrar  
Smithsonian Archives  
Smithsonian Institution Libraries  
Smithsonian Institution Traveling Exhibition Service

## SUPPORT ACTIVITIES

Computer Services  
Contracts  
Equal Opportunity  
Facilities Planning and Engineering Services  
International Exchange Service  
Management Analysis  
Personnel Administration  
Plant Services  
Printing and Photographic Services  
Protection Services  
Supply Services  
Travel Services

Approved February 2, 1976

*S. Dillon Ripley*  
S. Dillon Ripley  
Secretary



SMITHSONIAN INSTITUTION

FISCAL YEAR 1978 ESTIMATES OF APPROPRIATIONS

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SMITHSONIAN INSTITUTION

(\$1,000s)

SUMMARY OF APPROPRIATIONS

Account	FY 1976	Est. FY 1977	FY 1978 Budget Request (Cumulative Increments)				Total Request
			Within Target Increases	Subtotal	Uncontrollable Increases	Subtotal	
Salaries and Expenses Supplemental	81,564	82,106 2,882	3,274 /1	85,380 2,882	1,718	87,098 2,882	87,558 2,882
Science Information Exchange Supplemental	1,940	1,900 74	-	1,900 74	39	1,939 74	1,939 74
Museum Programs & Related Research (Special Foreign Currency Program)	500	3,481	(381)	3,100	-	3,100	4,500
Restoration and Renovation of Buildings	1,192	2,950	6,470	9,420	-	9,420	10,775
Construction & Improvements, National Zoological Park	8,390	6,580	(5,580)	1,000	-	1,000	6,000
Construction (Museum Support Facility Planning)	0	0	325	325	-	325	325
Totals - Regular	93,586	97,017	4,108	101,125	1,757	102,882	111,097
Totals - Supplemental		2,956		2,956		2,956	2,956

/1 Does not reflect \$556 of rejustified FY 1977 base funds

/2 \$2,500,000 was appropriated under this heading for the liquidation of contract authority for the construction of the National Air and Space Museum.





## GENERAL STATEMENT

Founded in 1846, the Smithsonian Institution is an independent establishment devoted to basic research, care and documentation of the collections, public education, and national service in the arts, sciences, and history. Its work is conducted in the United States and in many foreign countries. It is the world's largest museum complex, attracting more than 20 million visits yearly to its museums, galleries, and zoological park, as well as additional millions who view its annual folklife festival and its traveling exhibitions appearing across the United States and abroad. As custodian of the National Collections, it possesses more than 70 million natural history specimens, artifacts, and art objects. These collections are used for displays for the enjoyment and education of our visitors and are available for research by the staff of the Institution and by many hundreds of visiting students, scientists, and historians each year. A wide range of programs, including grant-supported activities, are conducted with other museums and similar institutions, with colleges and universities, and with Federal, State, and foreign government agencies and activities. Active education programs are conducted from the elementary to the senior postdoctoral levels. Major museum buildings, laboratories, collections spaces, and wildlife preserves provide facilities for these purposes.

The following statements reflect the broad goals and priorities of the Institution.

--Basic scientific and historical research is the foundation of the Institution's accomplishments and potential in its principal areas of output: the preparation and dissemination of scholarly research works and educational exhibits. Studies of man, his natural environment, and his cultural and technological progress must be given high priority.

--Museum collections at the Smithsonian and in other museums in this country are extraordinarily valuable national resources. Consequently, the Institution has an important responsibility to ensure the careful registration, conservation, documentation, storage, and accessibility of its own collections. It must also take a leadership role in the development of techniques and processes in collections management and preservation that will have applicability and benefit to all museums.

--The Institution's museums and laboratories are rich resources for education at all levels of public and academic interest. Concerted efforts must be given to reach new local and national audiences by means of teacher-training workshops, school tours and extension services to schools, fellowships, opportunities for training in museum and laboratory skills, new publications, television, and traveling exhibitions.

--Self-help measures to provide a portion of the resources required to implement Smithsonian programs must be developed. The magazine Smithsonian, museum shops, commercial publishing and national television arrangements, and the development of educational products to be marketed are examples of sound such ventures.

--Support resources (such as those applied to buildings maintenance, registration, and exhibits preparation) currently available must be organized and used to



provide more responsive delivery of services to program needs and must be augmented when study indicates that current levels are deficient for acceptable response.

The application of base resources and request for additional resources in FY 1978 have been predicated on furthering these objectives. In this FY 1978 budget presentation, each appropriation account is presented at various levels, reflecting requirements within and above the OMB target amounts. Anticipated essential supplemental appropriations for legislated pay raises have been included in the FY 1977 base amounts and shown on appropriation summary sheets. Exclusive of these supplemental amounts, the requested funding levels for FY 1978 are:

--Budget authority of \$101,125,000 which would provide funds for selected program and support requirements, of the highest priority, including the establishment of a working fund to meet operational problems and opportunities during the budget year; extend operating support to new National Zoological Park facilities; develop additional ADP capacity at the Astrophysical Observatory; and provide increased guard protection for new galleries, halls, and exhibitions. It would also allow the Science Information Exchange to keep pace with current workload without increasing the processing backlog; fund a slightly reduced level of foreign currency grants as well as the final U.S. contribution for the preservation of temples on the Island of Philae; provide for the most essential repairs and improvements to buildings and facilities, including construction of a study center and library as a sixth floor addition to the National Museum of History and Technology Building; and would fund initial planning on a museum support facility to house study collections, provide space for conservation training and work, and free Mall space for public use.

--Budget authority of \$102,882,000 which reflects an essential increment of funds for the "uncontrollable" costs of legislated pay increases and general inflation.

--Budget authority of \$111,097,000 which would further strengthen traditional and important program and support activities; fund additional worthwhile grants under the Foreign Currency Program; enable the Institution to perform more adequate maintenance and improvement of a valuable physical plant; and initiate redevelopment of the central area of the National Zoological Park, including construction of a modern exhibit facility for gorillas and orangutans and rehabilitation of the old reptile house.

Details on these requirements are in the following sections of this budget, arranged by appropriation account.

This budget request, if approved, would create a requirement for 12 new positions and \$475,000 (of which about \$200,000 would be nonrecurring) in future year operating budgets. Museum support facility planning funds, if provided, would be followed by a construction budget request estimated at \$15,000,000.



## SALARIES AND EXPENSES

1976 Appropriation.....	\$81,564,000	
Transition Quarter Estimate.....	\$22,629,000	
1977 Estimate.....	\$84,988,000	/1
1978 Estimate:		
Within Target Request.....	\$88,262,000	/1
Additional Over Target.....	2,178,000	
Total.....	\$90,440,000	/1

The Smithsonian's operating program includes as major components four history museums: the combined National Museum of Natural History and National Museum of Man, the National Museum of History and Technology, and the National Air and Space Museum. There are six art museums: the National Collection of Fine Arts, the National Portrait Gallery, the Renwick Gallery, the Freer Gallery of Art, the Cooper-Hewitt Museum of Decorative Arts and Design in New York City, and the Hirshhorn Museum and Sculpture Garden. Each of these museums and galleries has extensive research, exhibition, and public service activities.

There are other major components of the Smithsonian in the Washington area. The Radiation Biology Laboratory in Rockville, Maryland studies the effects of solar radiation. The National Zoological Park provides research and exhibition facilities in Rock Creek Valley, as well as animal conservation facilities near Front Royal, Virginia. Also in Washington, the Anacostia Neighborhood Museum operates in a low-income area of the city in cooperation with the local community. There is an oceanographic sorting center at the Washington Navy Yard.

Other facilities and activities are located throughout the nation and around the world. Chief among these are the 2,500-acre Chesapeake Bay Center for Environmental Studies in Edgewater, Maryland, the Tropical Research Institute centered in Panama, and the Smithsonian Astrophysical Observatory in Cambridge, Massachusetts. The Observatory also operates a multi-purpose observing facility at Mt. Hopkins in Arizona and a number of small observing stations around the world. Other facilities include the 350-acre Belmont Conference Center in nearby Maryland and the Washington-based Archives of American Art with supporting centers in New York, Boston, Detroit, and San Francisco.

The work of these and other program activities is supported by a variety of administrative and technical staffs, some functioning as central organizations, others operating under the supervision of a specific museum or research program director.

The Salaries and Expenses budget justification is presented in four major sections--program activities, support activities, working fund, and uncontrollable increases. The program activities section is subdivided into six categories: Research, Collections Acquisition, Collections Management, Exhibitions and Performances, Education and Public Orientation, and Other Services. Each of these categories represents a major program objective of the Smithsonian Institution and its various bureaus. Similarly, support activities are divided for budget presentation purposes into the following eight categories: Conservation, Libraries, Automatic Data Processing, Photography, Printing and Reproduction, Protection, Buildings and Facilities Management, and General Administration.

/1 Includes proposed \$2,882,000 supplemental appropriation.





Ass't Sec Science  
Ofc of International Programs  
Nat'l Mus of Natural History (2)  
STRI  
NZP (2)  
RBL  
Center for Study of Man  
NASM (2)  
CBCES (2)  
SAO (2)  
IESP  
Res Awards

Secretary (2)  
Sec Files  
Spec Assistant to Sec  
Treasurer  
OPB (7)  
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OEO  
Personnel  
MAO  
Travel  
Supply Services  
Printing & Photographic Svcs  
Protection (2)  
FPES (2)  
OPLANTS  
OCS  
IES





In the third section, we have proposed the establishment of a working fund, considered essential to the prudent and efficient management of the Institution; and finally in the uncontrollable section, we have presented special budgetary requirements which have resulted from inflation in salaries, goods, and services.

Details of the requested increases for Salaries and Expenses are provided on the following pages.



(\$1,000s)

SALARIES AND EXPENSES

Program Categories	FY 1976		Estimated FY 1977		Non- Recurring Costs	FY 1978 Target Request		FY 1978		Over Target Request		FY 1978		
						Increases		Total		Increase			Total	
	MY	\$	MY	\$		MY	\$	MY	\$	MY	\$		MY	\$
Research	459	13,125	447	13,166	-10	4	438	451	13,594	-	-	451	13,594	
Collections Acquisition	28	1,091	28	1,313	-	1	171	29	1,484	-	-	29	1,484	
Collections Management	397	7,210	424	7,847	-176	13	193	437	7,864	7	80	444	7,944	
Exhibitions & Performances	341	12,398	309	8,832	-254	7	365	316	8,943	-	-	316	8,943	
Education & Public														
Orientation	142	3,413	145	3,106	-6	-	120	145	3,220	-	-	145	3,220	
Other Services	12	982	13	1,005	-	-	-	13	1,005	-	-	13	1,005	
Total Program	1,379	38,219	1,566	35,269	-446	25	1,287	1,391	36,110	7	80	1,398	36,190	
Support Categories														
Conservation	35	1,192	44	982	-	-	-	44	982	1	85	45	1,067	
Libraries	99	1,878	112	2,066	-	1	65	113	2,131	-	-	113	2,131	
Automatic Data Processing	30	1,125	32	1,188	-	2	402	34	1,590	-	-	34	1,590	
Photography	40	910	44	949	-	-	-	44	949	-	-	44	949	
Printing & Reproduction	36	1,532	38	1,246	-30	-	194	38	1,410	-	-	38	1,410	
Protection	533	7,121	590	7,563	-	30	425	620	7,988	-	200	620	8,188	
Buildings & Facilities														
Management	830	20,741	925	23,496	-	27	702	952	24,198	6	80	958	24,278	
General Administration	353	8,846	373	9,347	-80	9	255	382	9,522	1	15	383	9,537	
Total Support	1,956	43,345	2,158	46,837	-110	69	2,043	2,227	48,770	8	380	2,235	49,150	
Working Fund	-	-	-	-			500		500					
Uncontrollable														
Total, Salaries & Expenses	3,335	81,564	3,524	82,106/1	-556	94	3,830	3,618	85,380	15	2,178	3,633	87,558	

/1 Excludes proposed supplemental of \$2,882,000.



## Research

FY 1977 Base.....	\$13,156,000
Within Target Increase.....	\$438,000
Over Target Increase.....	\$0
FY 1978 Estimate.....	\$13,594,000

Research is much more than the scholarly communication of experts; it is the essential work that produces program results in many other areas of Smithsonian responsibility. New exhibits are created and made meaningful by the strong underpinning of scientific, historical, and curatorial research. The National Collections become important, useful resources through the application of research. The act of collecting is made selective and rational by ongoing research. Publications of scholarly and public interest would not materialize without research.

Since its establishment 130 years ago, the Smithsonian Institution has maintained original research as the keystone of its efforts to increase knowledge. The characteristics of this activity include work of the highest quality, primarily long-term basic and fundamental research. This tradition of continuity enables the Smithsonian to provide the nation with a unique and invaluable series of baseline data. To ensure that the results of this research are widely disseminated and put to practical applications as rapidly as possible, increasing effort is being made to strengthen Institutional ties with universities and state and Federal agencies.

Research is carried out at specialized major research centers in six states (Virginia, Maryland, New York, Massachusetts, Arizona, and Florida), the District of Columbia, and the Canal Zone (Panama). Studies are also conducted at smaller stations and field sites throughout the world. A priority is to provide the research staff with maximum support in pursuing their specialized studies, to provide facilities with the most effective equipment and protection, and to encourage the widest possible availability of the Institution's scientific resources to students, organizations, and the public.

Since the appointment of Joseph Henry as the Institution's first Secretary, Smithsonian scientists have conducted research studies in biological and physical sciences. The Smithsonian has long concentrated on those areas of basic research which do not conflict with the mission-oriented agencies and more importantly has provided the necessary long-term baseline data useful for policy planners in applied areas. Scientific research at the Smithsonian covers a broad spectrum from research into distant space to investigations of the ocean's floor. The research bureaus, themselves separate entities, combine to view environmental problems in a holistic approach. Several non-bureau programs aid in this unification process. The International Environmental Science Program is a multi-bureau, interdisciplinary effort designed to study and compare various ecosystems in the tropics and subtropics. Of particular interest to researchers participating in this program are natural habitats critical in the preservation of endangered species. While the most intensive and detailed studies are conducted at two permanent Smithsonian facilities, the Tropical Research Institute and the Chesapeake Bay Center for Environmental Studies, projects are also carried out at several non-permanent facilities in the tropics.

The National Museum of Natural History through its collections provides a large data base of indicator species for use in studying endangered habitats.





For example, in FY 1975, the Museum's Department of Botany provided the first comprehensive list of endangered flora of the continental United States. Work completed in FY 1976 will result in a revised and updated listing of endangered flora of the United States. The National Zoological Park conducts research into the breeding activity of endangered species at its Research and Conservation Center at Front Royal, Virginia. The research will ultimately lead to better management of captive animals and provide greater knowledge in the fields of animal behavior and reproduction.

Development of land-use policy, a growing national concern, is being assisted by scientific information provided by the Chesapeake Bay Center for Environmental Studies. This Smithsonian facility, located in Edgewater, Maryland, concentrates on estuarine research. The Center's research on the Chesapeake Bay will ultimately aid in preserving economically important waterways elsewhere in the United States. Research on tropical ecosystems remains of great interest to the Smithsonian Tropical Research Institute. In FY 1977, intensive study will be focused on the capacity of tropical mammals to function as vectors of human disease. Recent studies have shown how vertebrates transmit yellow fever and other debilitating illnesses.

The link between studies of terrestrial and marine environments by the aforementioned bureaus and research in the space environment is the research conducted by the Radiation Biology Laboratory and the Smithsonian Astrophysical Observatory. Studies were continued at the Radiation Biology Laboratory this past year on the reaction of organisms to light and the monitoring of ultraviolet rays on the earth. Such studies are important in the development of alternate food sources, prediction of the potential for crop destruction by increased ultraviolet rays penetrating the atmosphere, and in determining the incidence of skin cancer by light. The Smithsonian Astrophysical Observatory continued its work on solar physics and high-energy astrophysics in order to bring a clearer comprehension to the origin of the universe. Additionally, research has provided preliminary data which may be useful in the harnessing of alternate sources of energy. With the completion of the National Air and Space Museum, research into air and space achievements and artifacts will be undertaken.

While recognizing the utility of interdisciplinary work and bureau-oriented research, the Smithsonian maintains its tradition of excellence for independent investigation through the Research Awards Program. The work supported by the Program is the type of research which cannot be carried out by universities or mission-oriented agencies due to the lack of collections and the ability to sustain the work for the long term. The Program offers an opportunity for researchers to engage in collaborative field research with colleagues in other institutions. Many opportunities for participation in expeditions and other field projects which often result in major scientific breakthroughs would be lost were it not for the Research Awards Program.

The Smithsonian's history and art activities serve the public through exhibits, demonstrations, lectures, publications, and performances. Each of these offerings is dependent on prior and ongoing research into the history of art, science and technology, government, industries, American culture, and the applied arts. The scope of this research ranges from the detailed analysis of individual paintings and sculptures to the study of the entire works of various artists and schools of art, from the history of a particular stamp to the history of our postal system, from the papers of an individual statesman to his portraits to his proper place in American history. In each instance, research is firmly grounded in artifacts and works of art in the National Collections.





During FY 1976, the Archives of American Art prepared a multivolume reference work on American art history, the Bibliography of American Art, to be published in 1977. The Cooper-Hewitt Museum, which will open in October 1976 in the Carnegie Mansion in New York City, began the research which will provide the underpinning for its FY 1977 exhibit program, tentatively scheduled to include eight temporary exhibitions as well as the installation of portions of the permanent collections. The staff of the Joseph Henry Papers continued their serial task of research on the papers of the Institution's first Secretary and pioneer American scientist. This work will result in publication of the third annotated volume in FY 1977.

At the Hirshhorn Museum, the National Portrait Gallery, and the National Collection of Fine Arts, research efforts were devoted to forthcoming exhibitions and accompanying exhibit catalogues. At the National Museum of History and Technology (NMHT), the curatorial staff was totally absorbed in the timely preparation of the Institution's two largest Bicentennial exhibitions, "A Nation of Nations" and "1876: A Centennial Exhibition." In 1977, curators at NMHT will turn again to their individual collections-based projects.

In FY 1976, base resources devoted to all aspects of research consisted of 459 man-years and \$13,125,000. Of this amount, 271 man-years and \$7,171,000 were directed to research encompassing all the natural sciences and anthropology; 54 man-years and \$2,913,000 to astrophysics; and 134 man-years and \$3,041,000 to historical and cultural research.

In FY 1977, resources in the amount of 447 man-years and \$13,166,000 will be used in essentially the same pattern. Salaries and benefits for the 447 man-years are estimated to cost \$10,692,000, with \$2,474,000 to be spent in other object classes. The FY 1977 base will be reduced at year end by \$10,000 to delete nonrecurring expenses associated with the Special Bicentennial Program.

Increase: For FY 1978, an increase of 4 man-years and \$438,000 is requested within target for research purposes.

An increase of \$200,000 is being sought for the Research Awards Program. To participate in this program, Smithsonian curators and scientists from all disciplines submit proposals to outside expert review panels. The proposals which are deemed worthy of funding frequently allow the investigator to pursue a particularly difficult or exotic facet of his disciplinary interest. Such efforts have long been the hallmark of Smithsonian science. Institutional tradition has been to give the scientist the freedom he needs to pursue his unique work to successful conclusion. There has been no funding increase in this program since FY 1973, and in FY 1977 Congressional action reduced the budget for this program from \$450,000 to \$390,000. Even with the higher amount, many worthy projects went unfunded. In order to maintain our position in the national and international science community, as well as allow the Institution to continue to recognize and fund quality work, a special effort is being made this year to increase the amount available for awards. This is a high priority item within the Institution's total budget request.

Identifying sources and carriers of human disease has captured man's attention since the dawn of civilization. Transmission of diseases is of particular concern to tropical regions of the world. The Smithsonian Tropical Research Institute in pursuit of its long-term ecological goals has identified several species of mammals which serve as prime carriers of human disease. A request for \$33,000 is sought to hire an ecologist to study



several species of sloths on Barro Colorado Island which transmit yellow fever along with a rare and deadly form of encephalitis. More basic knowledge of sloth's habits and biology would help medical science to conquer these illnesses. Research of this type is an example of how basic science pursuits of the Smithsonian can be translated into application.

An enormous quantity of observational data on the properties of the sun is available to scientists at the Smithsonian Astrophysical Observatory. A special and thorough analysis of the data could yield important new insights about how the sun interacts with earth's weather and environment. It has often been speculated, but never proven, that variations in magnetic activity or sunspot frequencies affect the weather on earth. Data analysis must be performed by a senior theoretical astrophysicist specializing in plasma physics (the study of ionized gases) who can bring advanced concepts to bear on the interpretation of the accumulated solar data and relate solar observations to similar phenomena observed in the laboratory and elsewhere in the universe. One position and \$50,000 are requested to enable the Observatory to employ a scientist with these capabilities and to provide related support.

The Research Institute on Immigration and Ethnic Studies (RIIES) was founded in 1973 to explore the effect of recent immigration on the cultural processes of the United States. In FY 1976, the Institute sponsored a national conference on the "New Immigrant; Implication for American Society" and smaller seminars, fieldwork, and publications related to the topic. The major thrust of the Institute's program in FY 1977 is to publish the proceedings of the conference and to hold several follow-up conferences. In addition, an expanded research and publication program will be pursued.

The Institute is receiving numerous requests for information and support from private foundations, citizens groups, and the Congress, which have severely taxed the limited staff and resources. In order to be responsive to this growing interest, an increase in the amount of \$47,000 is sought to hire a program analyst, to assist in developing publications and to augment the research staff, and a manuscript typist, to help with publishing the conference proceedings. An additional amount of \$8,000 is sought for general support such as equipment, supplies, contractual services, and travel.

In FY 1978, the Institution will continue to research and publish the results associated with the materials accumulated from the annual Mall folklife festivals produced during the period 1967-1976. Publications will take the form of monographs, disc recordings, films, and video tapes for use by folklorists, other academics, and the general public. The effort brings together the Institution's working experience with regard to festival production and serves as a scholarly basis for continued Institutional involvement in small, museum-related folk presentations.

In future years, the Institution will consolidate and strengthen its research activities in the area of folklife and folklore. Research will be supplemented by periodic performances, utilizing folk artists and practitioners from around the country, as well as the Institution's collections and curatorial interests. Initial research and writing projects encompass a printed history of the festivals, monographs on immigrant and ethnic lore; disc recordings comparing old and new world musical traditions and bow instruments such as the guitar and fiddle; and video tape studies of cross-cultural traditions including the Southern Black, Scottish, English, and Western African children's games.

An amount of \$100,000 is requested to fund costs of contractual arrangements, supplies, materials, travel, and equipment.





## Collections Acquisition

FY 1977 Base.....	\$1,313,000
Within Target Increase.....	\$171,000
Over Target Increase.....	\$0
FY 1978 Estimate.....	\$1,484,000

The Smithsonian Institution has over 70 million objects and specimens in the fields of art, history, and science. Even with this impressive number of items, however, it is essential to add selectively to the collections to improve their depth and breadth.

The collections have come to the Institution in several ways. Most were acquired during field research and collecting by Smithsonian and other anthropologists, biologists, and geologists. Public-spirited American and foreign citizens and organizations have also donated objects or funds. To a very limited extent, they have come as a result of the expenditure of Federal funds.

Since its establishment in 1846, the Institution--under the Board of Regents and statutory authorization (including 20 U.S.C. 50, 55, 59, and 60)--has been the recipient of hundreds of thousands of donations and bequests to the National Collections. These gifts have filled gaps in our collections and reflect the confidence and support the general public has for us. The gifts vary from entire collections of art works (e.g. Charles Lang Freer and Joseph H. Hirshhorn collections), to airplanes (e.g. the Wright Brothers' Flyer, and the Spirit of St. Louis), to major and minor biological collections, and recently a rare book library. Although many gifts are accepted each year, an equally impressive number are declined. In accepting a gift, a number of criteria are used to measure its appropriateness for inclusion at the Smithsonian. The first question asked is whether the donation pertains to the Smithsonian's broad interests. Secondly, is it something that could be protected and maintained elsewhere? And thirdly, does the gift duplicate collections already on hand?

Although many donated items in the collections cannot be appraised monetarily, their intrinsic value as national treasures (the Star-Spangled Banner, for example) far exceeds the amount of public funds that have been spent on their care, study, or exhibition. Furthermore, each year there are some 20 million visits made to the Smithsonian's museums, galleries, and zoological park. The visitors' pleasure and education are enhanced greatly by the opportunity to see rare specimens, important historical artifacts, and great national treasures that have come from private sources.

While the Smithsonian will continue to rely heavily on donated objects and specimens, it is very important that such acquisitions be supplemented with purchases. Such funds are required to replace and upgrade the quality of objects already in the collections, as well as to acquire particular objects to establish fully representative reference collections or to display in a new exhibition. Frequently, these objects are available only from dealers, particularly works of art. Prices continue to rise as competition for scarce artifacts and specimens intensifies. The history and art museums have committees of experts which approve items prior to purchase. This procedure ensures that only important objects are acquired.



Despite modest increases in Federal appropriations for the purchase of museum objects the last two fiscal years, the Smithsonian continues to spend considerably less than many other museums in this country and abroad. In FY 1976 a total of \$1,091,000 in Federal funds was available to the Smithsonian for the acquisition of collections. Of this amount, \$540,000 supported the personnel costs for 28 man-years of curatorial and support personnel engaged in field collection and development of contacts with potential donors. Only \$468,000 was available as cash for the outright purchase of objects. At the same time, some \$543,000 of the Institution's private funds were applied to the purchase program. For FY 1977, 28 man-years and \$1,313,000 will be budgeted in this category, of which \$535,000 represents salaries and benefits and \$672,000 direct purchase costs.

Increase: For FY 1978, an increase of 1 man-year and \$171,000 is requested within target. Of this amount, \$150,000 is sought for art purchases at the National Collection of Fine Arts, the Hirshhorn Museum and Sculpture Garden, and the National Portrait Gallery. A further \$15,000 in salary costs and \$6,000 in support costs are requested to fund 1 position at the Archives of American Art to begin collecting documentary records pertinent to American art history in the mid-Atlantic region.

The art museums of the Smithsonian are among the more recently established bureaus. As such, their collections are less extensive than those of the Museums of Natural History and History and Technology. In order to build representative collections in a period of continually inflating art prices, it is essential that increased funds be available for necessary purchases. Although the art museums do, of course, attract many gifts during the year, many works of art critical to exhibition and study programs are available only through purchase.

Reinforcing this need is the nature of applicable U.S. tax statutes which prevent practicing artists from deducting from their income a fair market value when donating their own works. (They may deduct only the cost of materials used, e.g. canvas and paint.) As a result, many of our purchases must by necessity be made from art dealers who are sensitive to rising prices in the market place and charge accordingly. The resultant high prices mean that many works we would like to acquire and preserve for posterity in the National Collections are simply not available, even at the program level for acquisitions requested for FY 1978.

One new emphasis in our art purchase program for FY 1978 involves acquiring photographs for the National Portrait Gallery, which only recently received authorization (P.L. 94-209) to collect and exhibit in this medium. Likenesses of many Americans prominent in our national history are available only in photographs (particularly 20th Century figures) and collecting efforts in this field are very important to the continuing vitality of the National Portrait Gallery's program of research, publication, and exhibition.

The Smithsonian's Archives of American Art collects, preserves, catalogues, microfilms, and makes available the papers of individual artists, dealers, and, in some instances, institutions that have shaped the course of American art history. Collecting activities to date have been concentrated in the Boston, New York, San Francisco, and Detroit areas where a rich variety of papers remains to be obtained. For FY 1978, a similar collecting activity is proposed for the lower-middle Atlantic states region, heretofore untapped.





## Collections Management

FY 1977 Base.....	\$7,671,000
Within Target Increase.....	\$193,000
Over Target Increase.....	\$80,000
FY 1978 Estimate.....	\$7,944,000

Collections distinguish museums from other institutions of learning or other cultural establishments. The millions of man-made objects and natural history specimens in our collections, including the animals of the National Zoological Park, require a great deal of highly skilled care.

Collections management includes the receipt, accessioning, documentation, and care of specimens and objects. Component activities include registering, cataloguing, labeling, storing, cleaning, preserving, fumigating, and related work. Also included in collections management is the maintenance of archives to provide support and background materials to the collections.

Collections management interfaces with conservation when specimens require special treatment and with research and scholarship when specimens are made available to scholars for their examination and study.

Registration staffs in the various museums ensure proper documentation of all acquisitions in each museum and gallery. Each registrar is knowledgeable in a particular subject area. Registrars from the various museums meet as a Registrars' Council to discuss common problems and to seek solutions to those problems.

Major strides are being made in the overall management of collections at the Smithsonian with the development of a generalized computer system for the collecting, indexing, and retrieving of data. Benefits from this system will include continuously updated catalogues, cross-referencing indices by categories, and more accurate and timely inventory control.

In the natural history areas the appointment of collections managers has proven very successful. One person has been appointed to serve as collections manager for each department. Storage areas are placed under limited access and controlled by the collections manager, who is responsible for the care and preservation of the specimens. Relieved of this duty, the scientists are able to devote more time to essential research.

The animal collections of the Zoo present many additional and unique aspects of collections management. In order to maintain the collections through reproduction and to conserve endangered species, new programs of animal care and propagation are being developed. Much of this effort goes into the determination of the needs in captivity of each species for both proper maintenance and effective reproduction. The latter is particularly important as the laws of the United States and many other countries have made the importation of animals virtually impossible, a trend that will continue.

Archival records are collected and maintained to support the collections and are situated in many locations throughout the Institution. Principal among these are the Central Archives, which document the history of the Institution and the history of American science in the 19th and 20th centuries; museum and gallery



archives, which document objects, specimens, and field and laboratory studies; and research and specialized archives. Examples of such archives are the National Anthropological Archives, which contain extensive manuscript and photographic collections primarily on North American Indian history and cultures, the National Anthropological Film Center which collects and preserves motion pictures of primitive peoples, and the Archives of American Art, which holds the personal and official papers and other documentation of painters, sculptors, critics, collectors, galleries, museums, and art societies. Current holdings in the Central Archives amount to almost five million documents dating from the 1830's to the present. Bureau and office holdings are estimated to contain at least another ten million documents covering a similar time span.

In FY 1976, base resources involved in this area totaled 397 man-years and \$7,210,000. This included personnel costs of \$5,983,000 for 42 collections managers and curators, 201 museum technicians and aides, 12 commissary stewards and farm workers, 68 animal keepers, 15 registrars, assistant registrars, and archival personnel, and 59 administrative assistants, secretaries, and clerks. Support funds of \$1,227,000 were used for animal food (\$245,000); storage containers (\$250,000); equipment and other miscellany, i.e. alcohol, preservatives, mounting pins, picture mounts, etc. (\$408,000).

In FY 1977, 424 man-years and \$7,847,000 will be devoted to collections management. Salaries and benefits are expected to cost \$6,637,000 while \$1,210,000 will be available for other object class expenditures. In FY 1977, a collections management study will be undertaken to draw together comprehensive information on current Institutional philosophy, policy, practice, and procedure regarding collections acquisition and disposal, storage, documentation, and retention (as well as other matters affecting space use and requirements, e.g., the availability and accessibility of collections for research and reference). This study will take most of FY 1977 to complete. The FY 1977 base will be reduced at the year end to delete nonrecurring expenses of \$176,000 associated with the collections management study and special Bicentennial program.

Increase: While the amount of resources associated with this activity is sizable, the scope and diversity of the work will require special attention and a strengthening of effort in the years ahead. For FY 1978, an increase of 13 man-years and \$193,000 is requested within target and 7 man-years and \$80,000 are requested over target.

The National Zoological Park requests 10 man-years and \$148,000 within target for its work at both Rock Creek Park and Front Royal. By FY 1978, various construction projects will be finished at the Rock Creek Zoo and the area will be repopulated with animals. The new areas will provide the geographic expanses now considered necessary for the well being of captive animals but will also require additional animal keepers. The role of the animal keepers in a modern zoo is also changing, causing the ratio of animal keepers to animals to increase. Importation laws now in effect have forced zoos to stop looking overseas for animals to replenish zoo stock, therefore zoos are now involved in extensive breeding programs.

The National Anthropological Film Center is seeking a within target increase of 3 man-years and \$45,000 in FY 1978. The Film Center was established in 1975 to take full advantage of the scholarly potential of film as a tool of inquiry into vanishing and changing life and cultures of the world. The Center will serve as a research facility and repository for visual studies. Presently being planned is a research film library in which film prints will permit review, study, and scholarly assembly, leaving original films undamaged to take advantage of future changes in copying techniques. Additional staff is requested to locate and preserve



valuable film and to develop a National Union Catalogue of existing anthropological film.

The National Museum of Natural History seeks over target 6 man-years and \$60,000 to assist in documentation and other preparation of its collections for relocation. This preparation and documentation should begin in FY 1978 if the work is to be completed when the proposed new facility at Silver Hill is completed.

The Smithsonian Archives is requesting 1 man-year and \$20,000 over target to work on the archives of the National Museum of History and Technology. This museum contains 3,000 cubic feet of archival matter and requires 1 archivist full-time to organize and maintain the material.





## Exhibitions and Performances

FY 1977 Base.....	\$8,578,000
Within Target Increase.....	\$365,000
Over Target Increase.....	\$0
FY 1978 Estimate.....	\$8,943,000

Exhibitions and performances are an important function of museums. No activity undertaken by the Smithsonian has more public visibility than our permanent and temporary exhibits and various performances.

The exhibits are as varied as the National Collections, covering art, natural history specimens (including many live animals), and objects of historical significance. Exhibits are on continuous display in ten buildings and at the National Zoological Park. The Cooper-Hewitt Museum of Decorative Arts is expected to open early in FY 1977. The Institution also circulates traveling exhibits for use by local groups.

Including the development of the script and the design and construction phase, a major exhibit takes several years to complete. Major exhibits are on display for a number of years, but with the number of exhibit halls at the Smithsonian, exhibits renovation is constantly underway. In order to ensure the timely completion of quality exhibits, a special exhibits report is prepared annually. This report enables Institutional management to have a comprehensive review of the exhibits being undertaken and a review of the cost of exhibits completed in the past fiscal year and those contemplated for the current year.

The majority of exhibits in both the National Museum of Natural History and the National Museum of History and Technology are now over ten years old. In the ten-year period 1966-1975, these exhibits have been viewed by over 90.2 million visitors. The National Museum of Natural History started a major renovation program in FY 1974. In replacing exhibits, new exhibit techniques, such as live displays (for example, the new Insect Zoo) and objects that can be handled, as well as the mixing of scientific disciplines in a hall, will provide more interesting and educational exhibits. If the completion rate of new halls can be sustained at 1-1/2 to 2 per year, it will take 20 years to complete the exhibits cycle in the Natural History Building.

The National Air and Space Museum opened July 1, 1976, with 25 exhibit halls and two presentation facilities. Objects were on display in all exhibit halls at the time of the public opening, but only 50 to 60 percent of the core units were complete. By the end of FY 1979, all halls are to be completed with permanent exhibits.

Further extensions of exhibits are performances and demonstrations. Demonstrations are carried out in exhibit halls to provide an additional dimension to the objects. Not only does the public see an object, it now also has the opportunity to learn how it works. Currently one major hall of late 19th century heavy machinery is displayed, much of it in operation, while technicians are available to explain the working of the machines on display. Concerts, films, lectures, and a puppet theater are presented to add to the visitor's enjoyment.

Of special interest to the Washington community is the annual Festival of American Folklife which has in the 10 years since its inception become one of the most popular events of the summer season with its presentation





of America's folk arts and ethnic origins. An extension of the Folk Festival to the national scene is a touring performance division which takes the foreign troupes from the Folk Festival to other cities.

The Institution also has recognized the need to assist other museums and institutions to bring quality exhibitions to their communities. For over 20 years, the Institution through its Traveling Exhibition Service has circulated shows around the country. These shows represent exhibits from the Smithsonian as well as other museums, numerous government agencies, and individuals. It is estimated that the shows circulated to every state in the union are viewed by five million people annually. For international exposure of American art, shows are organized also for exhibition overseas.

In FY 1976, 341 man-years and \$12,398,000 were used for exhibitions and presentations including exhibits being financed from the Bicentennial of the American Revolution appropriation. This included personnel costs of \$5,553,000--53 man-years for administrative and clerical personnel and 288 man-years expended in designing, film making, illustrating, editing, cabinetmaking, painting, and other exhibit production and maintenance tasks. Expenditures of \$6,845,000 were made in other objects for contracts for exhibits design and production including those for air and space exhibits and for purchases of paint, lumber, plexiglass, and other construction supplies and materials for exhibits work.

In FY 1977, 309 man-years and \$8,832,000 are expected to be used for exhibits and presentations. Of this total, \$5,352,000 will be used for salaries and benefits and \$3,480,000 for other objects of expense. The FY 1977 appropriation has \$254,000 in nonrecurring funds which will be deleted at year end.

Increase: The plan to modernize the Zoological Park includes not only buildings, walks, and roads, but the exhibits and graphics in animal enclosures and around the Zoo. An amount of \$35,000 within target is sought for this program. As part of the Master Plan, new picture signs were created for instant recognition. These signs enable visitors of all ages and nationalities to locate animal exhibits easily and quickly. The upkeep of these new graphic trailmarks will involve the repair of the concrete totems, replacement of emblems, and updating of signs as new construction takes place or new animals are added to the park. Films are also being used to expand the educational scope of the Park by showing the animals in their natural habitats. Funds are needed to replace existing film and to produce new films. Display units such as road signs, guide books, and exhibit cases will be produced. New labels on the animal displays will continue to be produced in English and Spanish.

As part of the Smithsonian's celebration of the Bicentennial, two major exhibits "1876--Centennial" and "A Nation of Nations" were designed and opened. Through FY 1977 these two exhibits will be maintained with Bicentennial funds. Starting in FY 1978, however, the two exhibits which comprise 90,000 square feet of space--containing thousands of objects--will require staff to continue their maintenance which includes cleaning, dusting, repairing labels, replacing audio-visual and other equipment, and replacing worn carpets. An increase of 5 positions and \$150,000 is sought within target to maintain these two exhibits.

The Anacostia Neighborhood Museum is active in exhibits work on three fronts. First, it designs and produces exhibits for its Museum building. Second, it makes copies of exhibits produced for the Museum for traveling exhibitions to be displayed elsewhere. Third, it has, with a grant from the Ford Foundation, established a training center to instruct minority inner-city youth in the



necessary skills for exhibits production. The Anacostia Museum requests a \$60,000 increase in FY 1978 to assist it in its exhibits production. A major retrospective exhibit is planned on Martin Luther King, Jr. After FY 1978 these funds will be used to support the exhibits work at Anacostia.

Having been established so recently, the National Portrait Gallery has a fairly small permanent collection. In order to enhance the exhibitions of the Gallery, it depends heavily on borrowing from outside sources for its shows. Funds are required to finance the shipping costs of these borrowed works to and from lenders. In FY 1975, the museum spent \$20,000 in shipping. Due to an increasingly active exhibits program, this cost is expected to increase to \$40,000 by FY 1977. An increase of \$20,000 is requested to cover this additional cost.

With funding from the Bicentennial of the American Revolution appropriation, the Smithsonian Traveling Exhibition Service doubled from 100 to 200 the number of shows it circulates annually. The overwhelming response to these exhibits has focused attention on the need for the Smithsonian to continue to offer numerous additional shows after the Bicentennial period. An increase of 2 positions and \$100,000 is sought within target to produce approximately four additional shows each year. The exhibitions will be based on Smithsonian collections, especially those of the National Museum of History and Technology, the National Air and Space Museum, and the Cooper-Hewitt Museum.



## Education and Public Orientation

FY 1977 Base.....\$3,100,000  
Within Target Increase..\$120,000  
Over Target Increase.....\$0  
FY 1978 Estimate.....\$3,220,000

Education and public orientation are a natural extension of other Smithsonian programs. In order to make the exhibits and research of the Institution meaningful to visitors and to a large national audience, a variety of educational activities and materials have been developed. Education and public orientation programs are aimed at individuals and groups ranging from pre-school children to the most advanced scholar, and from the casual museum visitor to the specialized collector.

At the elementary and secondary school levels, program efforts include the preparation and conduct of escorted lesson tours and teacher workshops, supervision of a teacher's resource center, and development of educational literature. To extend education opportunities to local school children unable to come to the Institution, a variety of audio-visual aids and three-dimensional object kits also have been developed.

At the pre- and postdoctoral levels, the Smithsonian offers fellowships to students who are majoring in areas of Smithsonian expertise. Fellows, who operate under the professional supervision and guidance of research staff, receive valuable training, augmenting their formal academic studies.

National and international seminars and symposia are held annually, often in cooperation with other institutions of higher learning. At the Institution's sixth international symposium to be held in June, 1977, the topic will be the role of family institutions and communities in shaping the nation during its first two hundred years and as continuing links to African, Asian, European, and other cultures which have enriched American civilization.

'Radio Smithsonian' aired weekly in the Washington, D.C. area presents interviews with staff specialists, music based on the collections, and other topics of general interest. Special demonstrations, lectures, and free films related to Smithsonian research and collections are also presented by the museums and galleries from time to time.

In a continuing effort to maximize the educational potential of exhibits, the Smithsonian has a program of research in exhibit effectiveness and visitor reaction. Studies include basic research on various exhibition techniques, labeling, floor plans, audiovisual and visitor-response devices; on the problems of visitor orientation, including directional and informational signage and related devices; and on various methods of deploying docent and security forces in museum galleries. From this program we hope to learn more about how museum visitors learn from the exhibits and which exhibit techniques are most effective.

Educational opportunities have not been restricted to the exhibits and the collections, however, but when possible have been extended to outlying facilities. At the Chesapeake Bay Center for Environmental Studies, for example, field trips, conferences, and workshops, offer a variety of environmental education experiences for adults as well as children. Moreover, with completion of the exhibits laboratory at the Anacostia Neighborhood Museum, a program to train minorities in exhibit techniques will be initiated this fall. The program will emphasize on-the-job training in all aspects of exhibit design, production, and installation.

To inform visitors and the general public of the varied array of Smithsonian programs and services a wide range of communication media are used. These include news releases, popular and scholarly periodicals, radio and television, documentary





films, and recorded phone messages such as Dial-A-Museum. Building guides and brochures describing the Smithsonian's major attractions are printed in English, as well as foreign-language versions, and distributed without charge. Other informational publications include an annual report of Smithsonian activities, a calendar of Smithsonian-wide events, and a quarterly publication which reviews significant current research of the Smithsonian's scholars.

Thousands of requests for interviews, research data, photographs, publications, and reference materials are answered each year. Also, upon request, the Institution will identify objects brought in by the general public.

In FY 1976, 142 man-years and \$3,413,000 were directed to Education and Public Orientation. Salaries and benefits totaling \$2,031,000 were used as follows: 23 man-years were devoted at the elementary and secondary levels; 20 man-years were applied at the higher education level; 9 man-years were used for publications exchange; 41 man-years were devoted to public orientation through the various media; 8 man-years went to demonstrations; 19 man-years were for education programs for the museum profession; 18 man-years were used for answering public inquiries; and 4 man-years were used for developing additional education programs for the public. The other object class spending amounted to \$1,382,000 and went for pre- and postdoctoral stipends; development and production of radio and video-tape programs; and related expenses, i.e. travel, supplies, and equipment. In FY 1977, 145 man-years and \$3,106,000 will be devoted to this activity. Salaries and benefits are estimated to cost \$2,173,000 with the balance for other objects. The FY 1977 base will be reduced at year end to delete nonrecurring expenses of \$6,000 associated with the Special Bicentennial Program.

Increase: For FY 1978, an increase of \$120,000 is requested within target for the Smithsonian's fellowship program.

This program offers individual research training, at small cost per individual, to pre- and postdoctoral scholars who require access to Smithsonian staff and collections. The Institution has resources in many specialized areas where the combination of staff expertise and specimen collections is not available in universities. Both the visiting investigators and the Smithsonian research staff find that these opportunities for training and guidance provide significant intellectual stimulation and important research results.

Academic visitors to the Smithsonian come from and return to schools all across the nation. The period of intense study and training spent at the Smithsonian allows them to carry to many universities specialized knowledge to be used in their development as better teachers and researchers.

During the past year over 3,000 verbal and written inquiries were received from individuals interested in the predoctoral and postdoctoral program at the Smithsonian. After intensive screening and counseling to eliminate all but those who might expect to have a strong chance of receiving appointment, about 200 applications were received. More than 50 percent of these were considered excellent and worthy of appointment, but only 20 percent could be offered an appointment.

The Institution is now able to fund approximately 40 predoctoral and postdoctoral scholars yearly, a number which has not increased in ten years. During this period, while demands from the academic and research community have grown--partially a factor of the expanded areas of study offered by new Smithsonian museums--inflationary pressures have gradually diminished the Institution's ability





to respond. The small increase requested would allow the Institution to offer 12 to 14 additional appointments each year. Every three years, \$20,000 of this amount would be used to fund publication of the information booklet, Smithsonian Opportunities for Research and Study. This book, the primary document describing opportunities and programs in higher education at the Smithsonian, is distributed to over 1,000 college libraries and to about 5,000 individuals each year.



### Other Services

FY 1977 Base.....	\$1,005,000
Within Target Increase.....	\$0
Over Target Increase.....	\$0
FY 1978 Estimate.....	\$1,005,000

The Smithsonian has several programs that benefit groups outside the Institution and are largely independent of other Smithsonian activities. Included in this category are the National Museum Act and the International Exchange Service.

The National Museum Act is a technical assistance program designed to strengthen and advance museum programs and the museum profession throughout the country. The Act makes it possible to provide funds in the form of grants to support projects which expand and improve professional training opportunities at many levels for museum personnel; conduct research or undertake special studies of museum practices, techniques, and operations; disseminate valuable information through encouragement of publications activities; and offer professional and technical assistance through provision of specialized services to the profession. Grants are awarded to institutions and individuals only for well defined proposals which clearly address themselves to the major objectives set forth in the Act.

Support provided under the Act in past fiscal years has been of great value to the nation's museum community. It has encouraged the raising of standards of performance of museums in all areas of their responsibility. It has enabled the profession to address itself to such major areas of concern as conservation of cultural, natural, and historical collections; computerization of museum data; and establishment of educational and training programs of constantly improving quality for museum personnel.

During the 1976 grants program, 167 applications, seeking support in excess of \$2,900,000, were submitted. Of these, only 67 projects could be funded for a total of \$715,790 including \$238,020 for conservation activities. Because of the limited funds available under the Act in FY 1976, many of the approved projects could not be supported in full and were reduced either in scope or in duration. Still other projects of considerable merit could not be supported at all.

Of the 67 grants awarded in FY 1976, 51 related to educational and training programs. These grants made it possible for 1,267 persons to participate in special seminars and training workshops on various aspects of museum work; for 19 museum professionals to travel to other museums for in-depth study of collections and operations; and for stipends to be made available for 63 internships and fellowships for museum training and education courses.

Seven grants were made for special studies and research projects which included completion of a comprehensive bibliography on museum and historic preservation work; development of a personnel policy manual for museums; research on the use of ultrasonics in art conservation; evaluation of materials and techniques of paper conservation; and the measurement of minute samples in radioactive carbon-dating processes. Nine grants were awarded to support professional and technical assistance projects. Among these were preparation of informational slide/tape units on conservation practices; an assessment of national conservation needs; a survey of regulations and laws concerning the collection, accession, and transport



of natural history specimens; an investigation on the feasibility for a regional textile conservation center; and the development of a handbook on tested museum educational programs.

The International Exchange Service is involved with the exchange of publications between the United States Government and private institutions and like institutions abroad. The Exchange Service was established in 1849 by the Smithsonian. Its responsibilities were formalized when the Brussels Convention of 1886 was adopted by the United States and the Smithsonian Institution became the official exchange bureau in the United States for the international exchange of literary, scientific, and cultural publications. In addition, a resolution to provide for the exchange of certain public documents (14 Stat. 573; as amended) also named the Institution as the official agent.

Base resources consisted of 12 man-years and \$982,000 in FY 1976. The personnel costs in FY 1976 totaled \$147,000 for 2 program managers, 1 clerk typist, and 9 shipping clerks. Spending in other objects totaled \$835,000 for the Museum Act grants, shipping, and miscellaneous expenses.

In FY 1977, \$1,005,000 and 13 man-years will be applied to this category. Salaries and benefits are estimated to cost \$148,000 with an estimated \$857,000 available in other objects, most of which is for the National Museum Act grants.

Increase: No increase is sought for this program in FY 1978.



## Conservation

FY 1977 Base.....\$982,000  
Within Target Increase.....\$0  
Over Target Increase.....\$85,000  
FY 1978 Estimate.....\$1,067,000

Objects deposited in museums are fundamental resources for museum activity: for displays, education, interpretation, and research. Yet, neglected, they decay from innumerable causes and, cared for, they may deteriorate from too much attention of a well-meaning but ill-advised kind. Therefore, conservators seek to forestall neglect, yet also to control their acts of care in order not to destroy those details of objects that the modern scholar observes in his search for information.

Conservation involves techniques carefully developed and applied to prevent or correct alteration or deterioration. These begin with records of condition (registration), continue with control of environment (humidity, dust, light, insects, rodents--buildings and facilities management), regular observation and careful handling (curators and museum specialists), then conservators may be called in to clean, mend, correct alteration and restore, while maintaining the record for posterity.

Conservation-scientists assist by analyzing products of alteration ("disease spots" on a book-binding turned out to be a plasticizer chemical migrating out of the plastic material that covered it) and materials proposed for long-term contact with objects from the collections (an elegant black molding proposed for support of a metallic object in a display case was found to contain substances that could cause corrosion during prolonged association). Organic acids in the corrosion products found on a leaden object were identified as coming from wood in a display case.

Conservation-scientists also analyze and test materials for research purposes (analysis of a series of pewter pots enabled them to be grouped, a grouping which was found to correspond with their English, Scottish, and French origins). They also devise analytical methods suited to museum objects which must not be damaged by analysis (X-ray techniques are adapted to analyze objects without sampling. This involves computer techniques for separating closely adjacent peaks in a spectrum). Neutron activation techniques followed by multi-variate statistical analysis have been applied to the study of Spanish-American pottery in order to support attributions from stylistic considerations. Thus the conservation-scientists assist by discovering hitherto unrecognized causes of deterioration and by establishing data bases for technical historians. Conservators extend their influence and skills through training programs, lectures, and video tape presentations. Efforts are being made to increase productivity by automation. A computerized data bank, already containing over 13,500 lines of analytical data prepared by conservation-scientists, is available for use.

In FY 1976, 35 man-years and \$1,192,000 were devoted to conservation. Salaries and benefits of \$571,000 were used for 2 administrative and clerical personnel, 23 conservators and analytical scientists, and 10 technicians. Other object spending in FY 1976 amounted to \$621,000 of which \$208,000 was obligated for new equipment for the central conservation facility. FY 1977 resources applied to conservation are expected to be 44 man-years and \$982,000. Salaries







and benefits will cost approximately \$744,000, leaving \$238,000 for spending in other objects.

Increase: Although conservation of the National Collections is a priority concern, the limitations of space and trained personnel prevent seeking a large increase in FY 1978. One man-year and \$30,000 are sought over target to work on paper conservation at the Cooper-Hewitt Museum. The Museum has a large collection of drawings and prints principally in areas of architecture, ornament, and decoration. The Museum also has an outstanding collection of rare books and a fine picture library made up chiefly of magazine clippings.

Many of these paper items are in need of repair and conservation. Funds have been solicited for a paper conservation facility in which this person can work with modern equipment.

An amount of \$55,000 is requested to be used to restore paintings. The increase would be shared by the National Collection of Fine Arts to help restore some of the paintings in its permanent collection which now number some 18,000 and by the Freer Gallery for the 168 objects in its American oil painting collection.



## Libraries

FY 1977 Base.....	\$2,066,000
Within Target Increase....	\$65,000
Over Target Increase.....	\$0
FY 1978 Estimate.....	\$2,131,000

The Smithsonian Institution Libraries supportsthe Institution's programs by providing library materials and information services to the research, exhibits, public service, and administrative staff of the Smithsonian and to qualified scholars and interested public. The Libraries consists of a system of 12 bureau and branch libraries and a strong central facility which coordinates system-wide planning and policy-making and provides those services which are most effectively performed centrally. Among the central services are administrative support, technical support (acquisitions, cataloguing, binding, and preservation), and general reference and circulation services. The Libraries' collections are widely dispersed (with bureau libraries in Panama; Cambridge, Massachusetts; and New York City; as well as many locations in Washington, D.C.), maximizing the accessibility of the library materials to their users.

The FY 1976 base consisted of 99 man-years and \$1,878,000. This included personnel costs of \$1,318,000 for a staff of 34 librarians, 52 technicians and specialists, and 13 administrative and clerical persons. Major allocations of the remaining \$560,000 included \$323,000 for library materials; \$66,000 for binding and preservation; \$24,000 for library equipment and furnishings; \$12,000 for contract cataloguing; and \$7,000 for training of library staff.

During FY 1976, 15,220 volumes were added to the Libraries' collections. The National Air and Space Museum Library opened in its new facilities, and the project to catalogue its uncatalogued library materials (approximately 6,000 volumes) was completed. Rare books were selected from the Burndy Library in Norwalk, Connecticut and transported to Washington. The Libraries' conservation program was enhanced by the addition of a professional conservator and the design of a conservation laboratory at the Smithsonian's Service Center.

In FY 1977, base resources will include 112 man-years and \$2,066,000. This amount includes \$1,565,000 for personnel costs and \$501,000 for support costs. FY 1977 increases will be used to continue the Libraries' steady progress toward the goal of providing basic library services to the Institution. Priority will be placed upon implementation of the conservation program. Increases will also be used to acquire library materials, to make fuller use of computerized cataloguing and to continue the policy of assigning Libraries staff to library locations in order to serve users directly.

Increase: In FY 1978, an increase of 1 man-year and \$65,000 is requested within target. This increase will enable the Libraries to continue to acquire materials needed to support the programs of the Smithsonian Institution and to make library materials available to users in a more timely and efficient manner.

The development of library collections was rated by users as their most important priority in a recent user survey. Of the requested increase, an amount of \$43,000 is sought to purchase those library materials most critically needed by users. This amount will allow a base for library acquisitions of approximately



\$350,000 (hopefully augmented, as in FY 1976, by savings in other areas). This falls short by approximately \$150,000 of enabling the Libraries to offer an adequate basic collection of library materials for its users.

Approximately 200,000 volumes of library materials owned by the Smithsonian are uncatalogued and virtually inaccessible to users. Moreover, despite significant improvements in productivity resulting from the use of computerized cataloguing, this backlog increases each year by approximately 4,000 volumes of newly acquired materials. Greater cataloguing productivity can be achieved by reassigning certain functions (such as filing and typing) from professionally trained cataloguers to technical support staff, thereby allowing cataloguers to concentrate on the intellectual efforts required for full cataloguing. An increase of 1 man-year and \$12,000 is requested to allow additional technical support for cataloguing services.

The practice of full-cataloguing, which entails development of a complete bibliographic description for each work, is, while desirable, both costly and time-consuming. In view of the large volume of unrecorded works, a study will be undertaken in FY 1977 to develop alternate techniques of acquiring bibliographic control of these materials. An amount of \$10,000 is requested to begin implementation of a new system in FY 1978. This system is expected to involve translation of a new short bibliographic record into a machine readable form.





## Automatic Data Processing

FY 1977 Base.....	\$1,188,000
Within Target Increase.....	\$402,000
Over Target Increase.....	\$0
FY 1978 Estimate.....	\$1,590,000

Automatic data processing has become an indispensable tool to the programs and support activities of the Institution. From limited applications in the early 1960's primarily directed at accounting or scattered research efforts, the computer is now used directly or indirectly by every bureau and office.

Museums and art galleries are making increasingly heavy use of automated systems to assist in the storage and retrieval of information associated with objects and specimens in the National Collections. These new ways to associate and analyze data are producing important new roles for these collections in improving man's understanding of environmental, cultural, and technological changes. While specific applications to individual collections must be tailored to meet particular needs, a sustained effort has been made to develop and maintain generalized systems which will handle variable data that has compatibility across the Institution. This includes such systems as SELGEM (Self Generating Master) which was designed primarily for the management of collection data. SELGEM has become widely recognized, particularly in the museum community, as a vehicle for information processing. It has been made available to many outside organizations for their use. Improved information transfer among institutions should result.

The use of the computer in the solution of complex statistical and mathematical problems in astrophysics, anthropology, geology, and biology has greatly increased among the professional research staff. Part of this increased use results from the exposure to computers that many of the new staff had in university training and work. Many of the previous staff, however, have turned to this more efficient and effective way of data handling in order to increase their productivity.

Important administrative applications include comprehensive systems for financial and personnel management, pay and benefits projections, library procurement, inventory management, mail and membership lists, non-expendable property control, and electricity conservation.

The use of computer technology in all activities continues to grow and will do so because the Institution's basic purposes, care and management of collections and research, cannot be performed effectively without this technology. With personnel costs continually increasing, it is essential to apply computer technology to those tasks which can be done more rapidly and efficiently by automation.

FY 1976 base resources devoted to automatic data processing activities consisted of 30 man-years and \$1,125,000 of which \$627,000 was spent on salaries and benefits and \$498,000 on other objects of expense, primarily the purchase of computer time. Staff resources consisted of 22 computer specialists and mathematicians, 2 technicians, and 6 key punch operators. In FY 1977, base resources are estimated to be 32 man-years and \$1,188,000 with some \$635,000 to be spent on personnel costs and \$553,000 in other object class areas.





Increase: The FY 1978 budget includes proposed increases of 2 man-years and \$402,000 within target. Of this total, the 2 new jobs (a junior level mathematician and a computer specialist) and \$32,000 are required by the Office of Computer Services which primarily serves organization units in the Washington, D.C. area. The recently-completed annual update of the five-year ADP plan for this office shows that the servicing of current customers for systems analysis and programming (maintenance and update of programs and some new work) and the prospects for some new applications will create by the end of FY 1977 a projected workload backlog in excess of 6 man-years. This is projected to grow to 10 man-years in FY 1978. Backlog areas of special concern are research and collections management support.

A further amount of \$325,000 is to allow the Smithsonian Astrophysical Observatory to purchase additional computer time from a faster and larger capacity computer to be operated by the Observatory's computer cost center. Modern astrophysics is critically dependent upon fast and powerful computers, not only for data reduction and numerical analysis, but for constructing mathematical models of observable astronomical objects. By comparing the resulting models with the actual observations, one can obtain a better understanding of the universe. Because the equations of stellar structure are extremely complex, computers are essential for solving them. A mathematical model of a star can be generated in a few minutes on a computer; the same job would take a year by hand.

The Observatory possesses an extensive, valuable, and growing data base on the Earth, the Sun, the Inter-Stellar Medium, and the High-Energy Universe acquired through ground-based and space-borne observations. Its theoretical capability to understand these data (for instance, the data on the Sun is likely to reveal the mechanism that heats the corona and drives the solar wind) has not been realized, however, because of a critical lack of sufficient amounts of computing time on adequate capacity equipment.

The computer center's present computer was purchased in 1968 with funds provided to the SAO by the National Aeronautics and Space Administration. This computer operates 24 hours a day, seven days a week, but is unable to meet research requirements despite constant improvements to programs to increase their operational efficiency. Its central memory is insufficient by a factor of 2 or 3 to accommodate complex problems. Its slow speed severely limits the productivity and efficiency of the staff. Malfunctions resulting from aging equipment are becoming more frequent resulting in increasing downtime. Much of the system is outdated and, as a result, is inefficient from the standpoints of energy conservation and use of space. The estimated additional annual cost of a replacement computer to its users will be about \$500,000 based on a five-year lease. The Observatory will provide about \$175,000 from its currently available funds.

Finally, an amount of \$45,000 is required by the Office of the Treasurer, National Zoological Park, and Smithsonian Libraries to purchase additional computer time for accounting and reporting, to record and analyze annual acquisition, health, behavior, and related data, and to improve the system for the acquisition of library materials.



## Photography

FY 1977 Base.....	\$949,000
Within Target Increase.....	\$0
Over Target Increase.....	\$0
FY 1978 Estimate.....	\$949,000

Virtually all bureaus and offices within the Institution have requirements for high-quality photographic materials. Photographs are important elements of scholarly reports, exhibitions and associated catalogues, illustrated lectures, accession and registration records, and administrative documents. Photographic services provided by the Institution include studio and on-site photography; processing and printing of film to obtain negatives, photographs, slides, viewgraphs, and other photographic products; photographic copy restoration; and filing and retrieving of negatives.

Facilities for accomplishing this work include a central office and laboratory, four photographic studios in major exhibition buildings, and several small bureau laboratories. This dispersion of photographic facilities is necessary since movement of valuable collections between buildings substantially increases the possibility of deterioration from improper handling and environmental change.

In FY 1976, 40 man-years and \$910,000 were used for photography. This amount included \$699,000 for salaries and benefits for photographers, laboratory technicians, supervisory personnel, and clerical assistants. The \$211,000 of spending in other objects was for supplies, materials, and equipment.

In FY 1977, 44 man-years and \$949,000 will be used for photography. Of this total, \$757,000 will be applied to salaries and benefits and \$192,000 in other objects.

Increase: No increase is being sought for Photography in FY 1978.



## Printing and Reproduction

FY 1977 Base.....	\$1,216,000
Within Target Increase.....	\$194,000
Over Target Increase.....	\$0
FY 1978 Estimate.....	\$1,410,000

The Smithsonian Institution carries out an active publications program. Smithsonian publications include a continuing series of scientific research reports in anthropology, astrophysics, biology, geology, and the earth sciences; reports on the history and development of man's major technical and cultural achievements; exhibits catalogues; education pamphlets; information brochures; and a detailed annual report covering all Smithsonian activities. Many items are distributed free to the visiting public and to libraries and scientific institutions around the world. In addition, requirements exist for the printing and reproduction of a variety of manuals, reports, specimen labels, and administrative directives.

In FY 1976, 36 man-years and \$1,532,000 went to printing and reproduction. This included personnel costs of \$624,000 for 2 administrative and clerical personnel, 18 editors and printing specialists, 6 publications and distribution clerks, and 10 duplicating equipment operators. Major allocations of the \$908,000 in program funds were for production costs including the purchase of supplies and equipment, maintenance of equipment, and payments to the Government Printing Office. For FY 1977, 38 man-years and \$1,246,000 will be budgeted in this category, of which \$653,000 will be applied to personnel costs and \$593,000 to support costs. The FY 1977 base will be reduced at year end to delete nonrecurring expenses of \$30,000 associated with the Special Bicentennial Program.

Increase: For FY 1978, an increase of \$194,000 is requested within target for printing and publication costs.

As a Bicentennial project the Institution began a major revision to the Handbook of North American Indians to summarize what is known to date on all Indian groups north of Mexico. Work has been under way for a number of years on this 20 volume encyclopedia which will replace the original two volumes issued by the Smithsonian in 1907-1910. The publication costs originally were contained in various appropriations for Bicentennial needs. However, this ambitious work has not been completed in the time originally allotted. Funds presently obligated will sustain the printing effort through FY 1977. Thereafter, an amount of \$100,000 is requested to publish additional volumes in FY 1978 and subsequent years. This increase would be used for a continuing effort until the Encyclopedia is complete, probably a four year project.

The Office of Public Affairs produces a number of publications including an employee newspaper, a monthly Calendar of Events, Research Reports, and building guides and leaflets. It is requested that an additional \$50,000 be granted to augment this publishing effort. These funds will be used to increase the size of several publications and to regularize the production of the leaflets and building guides which are provided free to visitors of the Smithsonian buildings. These guides are produced not only in English, but also in Spanish, German, French, and Japanese. Because funds have not always been available to produce these guides and leaflets in the past, the supply has run out before new stock can be delivered.





The National Collection of Fine Arts requests \$30,000 to fund publication of materials prepared in conjunction with the approximately 25 special exhibitions staged each year in the Fine Arts and Portrait Galleries building and the Renwick Gallery.

The National Zoological Park and the Archives of American Art together request \$14,000 to assist in their publications program. The funds would be used to publish the staff research results and annual reports.



## Protection

FY 1977 Base.....	\$7,563,000
Within Target Increase....	\$425,000
Over Target Increase.....	\$200,000
FY 1978 Estimate.....	\$8,188,000

The Smithsonian provides protection services for 12 major museums and art galleries, the National Zoological Park, the Smithsonian Tropical Research Institute, which is located in the Panama Canal Zone, the Chesapeake Bay Center for Environmental Studies and various other Smithsonian facilities. These services encompass both the security of the buildings and the collections and the health and safety of visitors and employees.

The first responsibility of protection is to provide security to the exhibits and collections in the buildings that are open to the public. Manpower and budget requirements for guarding are based on the designation of "posts." A post may be either one point (for example, an entrance to a museum) or an area, varying in size, based upon: the use of the area; crowd conditions; the value of objects on display; the vulnerability of those objects to accidental damage, theft, and vandalism; the effective field of vision of the assigned protection personnel; and the ability to employ electronic protective systems. The number of persons required to man one post may vary from one (the post must be manned eight hours a day, five days a week) to five (the post must be manned 24 hours a day, seven days a week).

Other functions of protection include fire and safety inspection; safety management; automatic detection for fire and burglary; and police operations to prevent or detect violation of regulations of the Institution as well as Federal, state, and local laws. In addition, health units and first aid facilities are located in various buildings to provide assistance and aid to the visiting public as well as employees.

The FY 1976 base resources consisted of 533 man-years and \$7,121,000. Man-year resources were comprised of 14 technical, clerical, and administrative personnel, 499 protection officers, 5 game wardens, and 15 fire, health, and safety personnel at a cost of \$6,332,000. Support funds in the amount of \$789,000 were used primarily to: (1) rent and maintain automatic burglar alarms and fire detection and suppression devices, \$285,000; (2) acquire and maintain uniforms, \$127,000; (3) purchase communication, alarm, fire, and radio equipment, \$45,000; (4) purchase electronic burglar/fire devices and a monitoring console, \$260,000; and (5) for safety equipment and health related costs, \$20,000.

During FY 1976, the first comprehensive Institution-wide policies on security, safety, and health were completed. Establishment of a comprehensive health services program is currently in the developmental phase and should be completed in FY 1977. Also during the past year, fire engineering surveys have been conducted in all major facilities identifying specific needs for fire detection and control systems.

The number of misdemeanor and felonious incidents committed in calendar year 1975 totaled 316, compared to 365 in 1974. This 13 percent decline in incidents is the first reduction in crime since 1971. Much of the credit for this reduction is attributed to the canine teams and the plainclothesmen who operate within the Mall facilities.



The first phase in the development of the Smithsonian-owned and operated alarm system control center is well underway with the renovation of the space for the center and the initial installation of the first monitoring equipment. By converting from the current use of leased, externally-maintained equipment and systems, the Institution will enhance its ability to detect and handle emergency situations in the fastest possible time.

The FY 1977 resources for protection services will total 590 man-years and \$7,563,000. Of this amount, \$6,911,000 is for personnel costs and \$652,000 is for support costs. The major portion of the increase in resources is related to the protection of new facilities, including the new National Air and Space Museum which opened on July 1, 1976, and the Cooper-Hewitt Museum which will open in October 1976.

Increase: For FY 1978, an increase of 30 man-years and \$425,000 is requested within target and an additional \$200,000 is requested over target. Many new halls, galleries, and exhibitions, which opened in FY 1976 as part of the Smithsonian's Bicentennial observance, will remain open for several years for the public's education and pleasure. Included in this category are the "Nation of Nations" exhibit (with a new terrace entrance) in the History and Technology Museum, the Portrait Gallery's new third floor gallery, and the "1876" exhibition in the Arts and Industries Building. Certain of these spaces were not previously open to the public. In other cases, the scope, layout, and contents of the new exhibits require more extensive protection. Through the transition quarter, protection services for these areas were funded by the Special Bicentennial Program. A request for additional guard coverage in FY 1977 was denied by the Congress. Thus to provide a minimum level of coverage in these spaces, guards must now be re-assigned from other posts--an action which severely limits effective coverage in those areas as well. An increase of 30 man-years to man 18 additional 7-day posts and \$325,000 is requested within target to provide long-term coverage of these areas.

An additional increase of \$100,000 is requested within target and \$200,000 over target to continue conversion begun in FY 1976 from a leased, externally-maintained alarm system to one owned and operated by the Institution.

With completion of this proprietary system, all alarm devices located in Smithsonian-owned facilities in the Washington, D.C. area will connect directly to an alarm system control center located in the Smithsonian Institution Building. By contrast, under the present leased system, only the contractor receives the alarm signal and valuable time may be lost before the Smithsonian can be notified and can initiate a response. With funds requested in FY 1978, guard offices located in the various museums and galleries will be modified to permit direct electronic communication with the control center. This will enable each building to electronically receive instructions for guard response, speeding up communication, and reducing the potential loss due to theft or fire. A final amount of \$200,000 to be expended in FY 1979 will complete the conversion to a proprietary system.





## Buildings and Facilities Management

FY 1977 Base.....	\$23,496,000
Within Target Increase.....	\$702,000
Over Target Increase.....	\$80,000
FY 1978 Estimate.....	\$24,278,000

This category includes the resources required to operate and maintain a large and growing complex of buildings and facilities centered in Washington, D.C., with important components in Cambridge, Massachusetts; Mt. Hopkins, Arizona; Panama; New York City; Front Royal, Virginia; Rockville, Maryland; on the Chesapeake Bay; and elsewhere. A survey was completed in FY 1974 of the Smithsonian holdings. The following statistics are in part from this report:

--3.5 million net square feet in some 200 buildings including 18 major public museums, art galleries, and zoological exhibition buildings, as well as other facilities for research, collections storage and restoration, and administrative and technical services.

--About 20,000 acres of natural preserve and parkland used for research, public education, and assistance to zoological parks throughout the United States (through the establishment of a conservation facility where endangered species can be bred).

--A physical plant requiring constant attention, with buildings ranging from a few months to about 170 years with the average being over 50 years old, with a replacement cost of perhaps \$330 million.

Primary responsibility for the operation and maintenance of Smithsonian buildings and facilities is concentrated in two central offices. The Office of Plant Services has overall responsibility for building operations, maintenance, and minor repairs. The range of services includes cleaning, labor, and related housekeeping services to facilities lacking their own custodial force, operation of temperature and humidity control units, transportation, communications, minor repairs and alterations to buildings, moving and rigging services, landscaping and grounds maintenance, and mail/messenger service. Trade and craft assistance, such as carpentry, painting, and electrical work, also is provided. The National Zoological Park provides the same range of services for its current and planned new facilities and for its extensive natural areas.

In the larger galleries and museums, custodial and labor personnel together with a small number of trade and craft personnel have been administratively assigned to the museum directors who have direct responsibility for the appearance of their buildings.

Planning and design, engineering, architectural, and construction supervision functions also are important components of buildings and facilities management. Approximately 300 requests are processed annually by the Office of Facilities Planning and Engineering Services, ranging from architectural/engineering consultation to full planning, engineering, and construction management services. Services may either be provided by staff professionals or by consultants. Projects include: major repair and maintenance; restoration and renovation; improvement and alterations including those needs associated with new exhibitions; site development; new construction; and long-range planning. In addition, a small





construction management office has been established at the Zoo to enable close supervision and immediate response to a large and complex construction program.

FY 1976 resources consisted of 830 man-years and \$20,741,000. Included in the FY 1976 base are personnel costs of \$10,463,000 for 104 administrative and clerical personnel, 374 custodial and labor employees, 271 mechanical and trades personnel, 47 gardeners and grounds keepers, and 34 vehicle and equipment operators. Of these employees, 38 percent were assigned to the Office of Plant Services, 16 percent to the National Zoological Park, and the balance of 46 percent (almost all custodial personnel), were assigned directly to the bureaus. Support funds of \$10,278,000 were spent primarily as follows: utilities (steam, electricity, gas, water, and heating fuel), \$3,720,000; telephone and telegraph service including Federal Telecommunications System, \$946,000; space rental, \$1,311,000; penalty mail, \$392,000; and service contracts, such as elevator maintenance and inspection, uniform cleaning, and pest control, \$250,000. The balance of \$3,659,000 was spent for repairs, maintenance, and gas for motor vehicles; supplies, materials and equipment for the repair, maintenance, alteration, and improvement of grounds, mechanical systems and building space; and custodial supplies and materials.

In FY 1977, resources are expected to be 925 man-years and \$23,496,000 of which \$12,790,000 will be used for personnel and \$10,706,000 will be applied to other object expenses.

Increase: The base for building and facilities management may seem large, but many important services are needed to serve adequately a growing but aging plant; to serve active and productive research, exhibition, and education efforts; and to serve the huge influx of visitors. For FY 1978, the Institution is seeking additional support within target of 27 man-years and \$702,000 and over target 6 man-years and \$80,000. The \$702,000 requested within target would be applied as follows:

--11 man-years of permanent staff and 7 man-years of temporary staff to maintain new and complex mechanical systems being installed at Rock Creek and Front Royal by the National Zoological Park. The new buildings of the Zoo are larger and more mechanically complex than the ones they replace. The total enclosed floor space within the Zoo which will require heating, cleaning, air conditioning, and other maintenance will have grown from 175,000 square feet in 1974 to 425,000 square feet in 1978. The new structures have been built to enhance the comfort of the viewing public and the health and safety of the animals. Swimming pools, moats, and air conditioning have all been included in the rebuilt zoo. All these systems require personnel to maintain them and other objects of expense to finance their costs. Nine mechanics at an annual cost of \$135,000 are requested to maintain the mechanical systems at the Zoo. The mechanical systems are much more complex in the rebuilt zoo at Rock Creek where the lives of the animals depend on properly functioning equipment. The mechanics are necessary to provide the necessary preventive maintenance and to respond immediately if problems do arise.

Seven man-years of temporary laborer staff and \$50,000 are requested to augment the cleaning force. These employees will supplement the regular workforce during the peak visiting hours of the summer and on weekends.

Two maintenance mechanics at a cost of \$26,000 are requested for the Front Royal Conservation and Research Center. Fifteen dwellings, 12 barn complexes



and 40 other structures are in use at this Center. Farming, animal management, and research are conducted here. These 2 mechanics are requested to maintain the electrical, water and sewage systems as well as other equipment.

Other object funds in the amount of \$296,000 are requested; of this total, Rock Creek would receive \$256,000 and Front Royal \$40,000. The cost of heating and cooling new or renovated structures at Rock Creek will require funds in the amount of \$156,000 while Front Royal will require \$25,000. At Rock Creek, water treatment chemicals for the many moats and ponds, live plant and tree replacements, parts, electronic equipment maintenance contracts, cleaning supplies, paint and other materials will cost an additional \$40,000 annually. An annual budget of \$60,000 is required to replace tractors, sweepers, and hauling vehicles and to purchase some new equipment, such as small asphalt rollers to build and repair trails (a difficult job to contract out since the projects are individually very small), cranes to lift animals, and waste removal equipment. An annual budget of \$15,000 for Front Royal is requested to purchase gasoline, cleaning supplies, medicine, mini-farm equipment, and tools.

--5 man-years and \$70,000 to assist in the maintenance of the upgraded horticultural displays in and around the museums. Two additional gardeners are needed for the South Yard and to maintain the planters in the buildings, especially in the Arts and Industries Building. A general mechanic is requested to maintain the sprinkler system and to do other construction jobs in and around the buildings and at the greenhouse complex. A truck driver and a clerk typist are requested to provide appropriate support services to the horticulture activity.

--2 man-years and \$40,000 are requested to improve capability in planning, architectural, engineering, and contract supervision services for construction, alteration, exhibit, improvement, and repair projects.

--2 man-years and \$20,000 to help maintain the Freer Gallery of Art. This staff will be used to maintain public restrooms and to clean offices and the library.

--\$65,000 is requested to finance the higher rental fees for space currently under lease and to provide a small budget for space modification in rental quarters.

Over target, an increase of 6 man-years and \$80,000 is requested for the Office of Plant Services. This increase would be used to employ 2 additional window washers, 2 mechanics, 1 laborer, and 1 shipping and receiving clerk. The Institution currently has 3 window washers. With the total crew of 5 requested in FY 1978, it would be possible to wash the windows three times a year. The number of off-Mall installations including Silver Hill, the exhibits laboratory at Anacostia, and the Service Center requires 2 mechanics to maintain Smithsonian equipment. One laborer is needed for the Service Center to assist in the storage/warehousing operations. A shipping and receiving clerk is also required for the Service Center.





## General Administration

FY 1977 Base.....	\$9,267,000
Within Target Increase.....	\$255,000
Over Target Increase.....	\$15,000
FY 1978 Estimate.....	\$9,537,000

General Administration includes the Offices of the Secretary and the Assistant Secretaries and some 50 bureau and office directors and their immediate staffs. Included under this heading are the staff specialists with expertise in auditing, budgeting, law, personnel, accounting, management, equal opportunity, procurement, supply, and travel. The personnel in these areas provide guidance and assistance to the Secretary and his principal assistants and to the bureaus and offices for the operation of this large and complex organization. They are responsible for the overall management, administration, control, and review of over 50 major program and support activities located in many parts of the world; for solution of complex legal problems, including those arising from the operations of a private, university-like corporation, as well as those common to government organizations; for personnel administration, including training, counseling, and upward mobility for over 3,000 Federal employees; and for about 13,000 annual procurement transactions, totaling close to \$33 million. In addition, they perform the budgeting, expenditure control, and auditing of close to \$130 million of operating, special project, and construction funds from all sources. Recent efforts designed to strengthen and improve the information flow and decision-making process include the establishment of a Council of Directors, an Administrative Officers Council, and a new accounting classification system.

In FY 1976, base resources applied to general administration consisted of 353 man-years and \$8,846,000. This included personnel costs of \$7,300,000 for 48 administrative assistants and officers, 7 attorneys, 38 man-years in financial management, 38 man-years in personnel administration including equal opportunity, 10 man-years in management analysis including forms control, 3 man-years in travel services, 7 man-years in auditing services, 25 man-years in supply services, 45 man-years in executive management or advisory assignments, and 132 man-years in clerical and other supportive services.

Other object spending of \$1,546,000 included as major items \$55,000 for the purchase of office supplies and materials stocked by the central Office of Supply Services; \$36,000 for expenses associated with boards or groups established to advise the Secretary, such as the Foreign Currency Advisory Board, the Smithsonian Council, the Research Awards Advisory Committee, and the National Museum Act Advisory Board; \$56,000 for consultant service contracts; \$100,000 for employee training; and \$267,000 for the rental and purchase of copying equipment. The balance was used for specialized supplies and materials, books and equipment for use in offices, travel, and outside legal counsel.

In FY 1977, 373 man-years and \$9,347,000 will be devoted to general administration. An amount of \$7,893,000 will be devoted to salaries and benefits, with the balance, \$1,454,000, devoted to other object spending similar to last year. The FY 1977 base will be reduced at year end to delete nonrecurring expenses of \$80,000 associated with the Special Bicentennial Program.

Increase: In FY 1978, an increase of 9 man-years and \$255,000 is requested within target and 1 man-year and \$15,000 over target.





Funds in the amount of \$50,000 are sought for a planning and feasibility study for a Mall site owned by the Smithsonian. The Congress reserved the site at Third Street, Maryland Avenue, Fourth Street, and Jefferson Drive in Public Law 94-74, approved August 8, 1975. In approving the reservation of this site for future public uses of the Institution, the Congress requires the Institution to go back to them for their approval of the plans for the site. These funds requested will be used for consultative purposes to enable the Institution to develop viable alternatives for public use of the land. The results of the study will be submitted to the Office of Management and Budget and the Congress. It is not now anticipated that such a plan would entail the erection of a permanent facility.

Funds are requested to complete the final stage of converting contract personnel to Federal status at the Smithsonian Astrophysical Observatory. In FY 1975, the first step was taken to correct the imbalance that had developed during the preceding years between Federal and grant and contract administrative and support activities. The final step in correcting this imbalance is 6 man-years and \$125,000.

The balance of the within target increase would provide 2 man-years in personnel administration and 1 man-year in management analysis at a cost of \$80,000. The increases in personnel administration would provide a labor-management specialist and a classification specialist. A management analyst would be used to produce management directives in clear, concise language in a timely manner.

Over target, 1 man-year and \$15,000 are sought for a contract specialist to process contracts and to provide for orderly maintenance of contract provisions and incorporation of procurement regulation changes in a timely manner which is essential to the contracting process.



## Working Fund

FY 1977 Base.....	\$0
Within Target Increase..	\$500,000
Over Target Increase.....	\$0
FY 1978 Estimate.....	\$500,000

The Smithsonian Institution requests within target an increase of \$500,000 for a Working Fund. The Working Fund would be used to meet unexpected needs that arise during the fiscal year. A combination of several factors makes the working fund essential to the operations of the Institution. The Salaries and Expenses appropriation when presented to the United States Congress is divided into 50 line items. These line items represent highly diverse activities that range in budget size from over \$13,000,000 (Office of Plant Services) to under \$200,000 (Office of Equal Opportunity). With the lengthy lapse between the time budget estimates are formulated and presented to OMB and the close of the budget year (now exceeding 24 months), it is virtually impossible to anticipate and identify every need at such a fine level of detail.

Furthermore, unlike most Government agencies, the Institution operates, protects, and maintains its own buildings and properties without assistance from the General Services Administration. The buildings vary in age from a few months to well over 100 years, and the properties range from Mall sites to an observatory at Mt. Hopkins, Arizona, or an island in the Panama Canal.

Over a span of 24 months, a large number of unexpected expenses are bound to develop--for example, rate increases in steam, electricity, and telephone bills, mandated partial absorption of legislated pay increases, storm damage, machinery breakdowns, or unexpected exhibit demands.

Major variations in budget plans are, of course, handled either through reprogramming requests or through the supplemental appropriation process. The inherent complications and time lapses involved in the latter method preclude its effective use to meet emergency demands. Reprogramming would also prove too lengthy a process for what may be a small but pressing problem. Hence, for a number of years, the Institution created a Working Fund of approximately \$1,000,000 by setting aside up to two percent of line item amounts in the Salaries and Expenses account. This procedure, which operated with the knowledge and support of our bureaus and offices, eliminated the serious irritations and disruptions caused when bureaus must be asked to relinquish previously allotted funds to fund some unforeseen Institutional requirement.

In reviewing the budget for FY 1977 the Congress eliminated the Working Fund and reduced the Salaries and Expenses appropriation by an equal amount. It is the firm belief of the Institution that the flexibility offered by the Working Fund procedure is necessary for prudent and efficient management of the Institution.



## Uncontrollable Increases

Additional funds are sought to finance costs that are beyond the control of the Institution. These increases result from law, prevailing practices of wage setting, and general inflation. A total of \$1,718,000 is requested for the following increased costs.

Necessary Pay and Related Benefits.....	\$945,000
Inflation in Other Objects of Expenses.....	\$773,000
	<u>\$1,718,000</u>

NECESSARY PAY AND RELATED BENEFITS. An amount of \$945,000 is required for personnel compensation and benefits for the projected higher costs in FY 1978 of FY 1977 staff. These increases accrue to employees as a result of within-grade step increases and legislated pay raises. Costs are calculated on a position-by-position analysis taking into consideration approved new hires in the current year and savings from turnover and filling of vacancies at lower grades where possible. Absorption of these costs from currently available funds seriously impairs approved program activity. First, for every \$12,000 that must be applied to these costs from funds already in salaries and benefits, one man-year of approved employment is lost. Second, if other object class funds must be applied to these costs, otherwise productive employees are left without the supplies, tools, and equipment they need to perform their jobs well. These additional costs are attributable to the following externally-imposed factors.

(1) Within-grade Step Increases. Necessary pay funding of \$916,000 is required in FY 1978 for within-grade step increases. For General Schedule employees, such increases are required by 5 U.S.C. 5335. Wage employees are covered by law and prevailing practice. Such increases must be granted if employees are performing at acceptable levels of competence. In any one fiscal year the costs of within-grade increases are substantial. There is not only the cost of annualizing step increases granted in the previous fiscal year but also the part-year cost of new actions in the current year.

The General Schedule portion of this request amounts to \$735,000. There are over 2,600 General Schedule employees with 1,521 scheduled to receive a new within grade in FY 1978. The Wage portion of this request amounts to \$181,000. There are over 900 Wage positions with 461 scheduled to receive new within-grade increases.

(2) Annualization of Legislated Pay Raises. Funds in the amount of \$189,000 are requested to annualize the General Schedule and Wage pay increases to be effected in FY 1977.

In accordance with P.L. 91-656, General Schedule salary scales are adjusted each October to rates comparable to those paid for similar work in private industry. Public Law 94-82 provides for equivalent adjustments to salaries of Federal executives. The total cost of the raise to be granted in October, 1976 (based on a 5 percent increase) is estimated to be \$2,102,000. A supplemental appropriation of \$2,021,000 will be sought in FY 1977. The balance of \$81,000 is requested in FY 1978 to provide full-year funding.





Wage raises are granted under the authority of 5 U.S.C. 5341. Prevailing practices call for Wage pay scales to be reviewed by a Wage Finding Authority in each geographic area. In the Washington area, this has resulted in Wage employees receiving a pay raise in October of each year. Smithsonian Wage employees in Panama, Maryland, Virginia, Arizona, and New York receive similar wage hikes at other times. Definite information on the amount of the FY 1977 raises has not been received; therefore, the same percentage increase as was granted last year (slightly in excess of 10 percent) has been used here. Total cost of these raises is estimated to be \$969,000. A supplemental of \$861,000 will be sought in FY 1977 while the balance of \$108,000 is sought in FY 1978 to provide full-year funding.

(3) Reduction for one less working day. An amount of \$160,000 has been used to offset the above increases. FY 1978 will have 260 paid work days, one less than in FY 1977.

INFLATION IN OTHER OBJECTS. In recent years there have been unparalleled price increases in virtually all "other object" areas of expenses. In most areas we have attempted to absorb these price increases and have limited our request for additional funding to the costs of salaries and benefits and utilities and communications. Too often, this absorption has resulted in undesirable procurement practices, such as purchasing uneconomically small quantities or deferring replacement of obsolete or inefficient equipment. While such actions are expedient on a short-term basis they are costly in the long run. If allowed to continue indefinitely, this absorption of heavy inflation in essential areas of Smithsonian operations will severely restrict approved program activity. Hence, in FY 1978 an increase of \$773,000 is requested to restore buying power of funds appropriated in FY 1977. This increase was derived by applying 5.9 percent (the percentage increase in the Consumer Price Index during FY 1976) to funds appropriated in all but two areas of "other objects of expense." The two areas excluded were "Rent, communications, and utilities" (where additional funding of inflation has already been received) and "Grants."

The following examples of routine, but important, recurring types of expenses are provided to show representative experience.

Animal food--The cost of feeding a reasonably stable animal population has increased from \$245,000 in FY 1975 to \$275,000 in FY 1976--an increase of over 12 percent.

Natural History collection storage cases--About 600 cases of varying sizes are purchased in an average year. While price increases vary according to the specific case, the following price increases are considered representative. Botany cases, of which approximately 80 are purchased each year, cost \$206 in FY 1975 and \$262 in FY 1976--a price increase of 27 percent. Standard quarter unit specimen cases, of which 75 to 100 are purchased each year, cost \$144 in FY 1975 and \$166 in FY 1976--a price increase of 15 percent.

Buildings maintenance and custodial supplies--Price inflation on commonly-used supplies and materials for building repair and maintenance and for custodial supplies has averaged over 30 percent during the past year.

Purchase of serials and monographs--In FY 1976, the average increase in the cost of serials was 12.9 percent and of monographs was 9.4 percent. Thus \$12,000 expended for serials and \$18,000 for monographs were attributable to inflation.





1976 Appropriation.....	\$1,940,000
Transition Quarter Appropriation.....	\$521,000
1977 Appropriation.....	\$1,974,000/1
1978 Estimate:	
Within Target Request.....	\$1,974,000/1
Additional Over Target.....	39,000
Total.....	\$2,013,000/1

The Smithsonian Science Information Exchange, Inc. (SSIE) was established in 1949 to provide a national source of information on research in progress. Its purpose then, as it is now, was to facilitate research planning, management, and coordination through the dissemination of information designed to prevent unnecessary duplication of research and to foster scientific communication within the nation's research community.

The Exchange has worked closely with policymakers in many Federal agencies to develop ways in which the SSIE data base could be more effectively applied to the solution of problems of national and international importance. As a result, a number of large-scale support activities have been initiated in areas such as energy, cancer, and toxicology research. In this context, the General Accounting Office (GAO), in a recent report to the Congress, which analyzed Federal funding for materials research and development based on information drawn from the SSIE data base, documented the importance of SSIE's policy analysis support capabilities (and identified a need for strengthening them)./2 Although the recommendations made in this report are still pending Congressional consideration, the Exchange has indicated its willingness to proceed with their implementation if authorized and if funds are made available.

SSIE's budget request for FY 1978 is \$2,013,000. This request represents an increase of \$39,000 over the previous year, all of which is intended to provide for the Federal support portion of the cost of scheduled within-grade increases for employees. In order to make up the difference between the amount requested and that believed to be required both to process input at the projected FY 1978 level and to meet continuing inflationary increases in operating costs, SSIE is examining a number of steps which might be taken to reduce processing costs and increase user revenues. Barring unanticipated increases in project registration and costs, it is expected that the Exchange will be able to implement successfully actions which will allow it to do so without increasing the SSIE processing backlog.

The operation of the Exchange has two principal components. The first is the collection, indexing, and entry into its computer system of information on research in progress in all fields of science. The extent of this effort is measured by the number of projects received each year from organizations which voluntarily register their research. The fact that input volume has risen

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/1 Includes anticipated supplemental appropriation request of \$74,000 to offset the impact on input operations of an expected pay raise of 5.16 percent October 1977 equivalent to the General Schedule increase.

/2 Comptroller General of the United States, Federal Materials Research and Development: Modernizing Institutions and Management, OSP-76-9, December 2, 1975.



significantly in recent years (Table I) not only reflects the importance attached by a growing number of organizations to the purposes of the Exchange, but serves, as well, as an indication of the comprehensiveness of its coverage, the effectiveness with which the data base can be applied to meeting user needs, and the extent to which the Exchange can expect to continue to expand the use of its services.

The second major component of SSIE's operation is the delivery of information products and services through the retrieval of information from the data base. SSIE provides information compiled from the data base directly to users in the form of search products as well as indirectly through a growing number of specialized information centers. In addition, SSIE information is regularly processed for publication in catalogues of research in progress in specific subject areas, such as toxicology, water resources, cancer, international energy research, and dental research. Distribution of these catalogues by the organizations which sponsor their compilation brings SSIE information to users on a significantly broader scale than would be possible through response to requests submitted by individuals directly to the Exchange.

Another major example of the information services provided is the establishment and operation by SSIE of a Current Cancer Research Project Analysis Center under the International Cancer Research Data Bank program. Funded by the National Cancer Institute for an initial period of three years, SSIE, through the Center, has undertaken to expand input in the field of cancer research, improve existing indexes and indexing techniques involving this research, and provide a wide variety of information services to both the national and the international cancer research community. As an integral part of this effort, SSIE's file of information on cancer research in progress is also being made available to on-line users through the computerized MEDLINE system operated by the National Library of Medicine.

Demand for SSIE output services, all of which are charged for, has increased dramatically over the past five years (Table I). As this demand has grown, SSIE has consistently pursued policies designed to maximize user revenues and minimize requirements for Federal support. The success with which it has done so is reflected by the fact that despite the increased costs of rapidly expanding input and output workloads, SSIE has been able to hold its requirements for Federal support to a level below the rate of inflation alone. This success can be attributed in part to major improvements in both the comprehensiveness and the timeliness of the information in the data base which have attracted a growing number of users to the system. It is also the result of actions by the Exchange to improve and expand its services and to increase user fees whenever it has been possible to do so without these increases being counterproductive to the goal of maximizing revenues. The most recent increase, effected on April 1, 1976, raised product prices by an average of approximately 25 percent.

SSIE expects to continue to improve its data base and to expand user revenues in a manner designed to yield increasing user contributions to the total cost of operation. A number of major technical improvements have already been made. The Exchange has successfully negotiated for larger percentages of its Federal input to be supplied in magnetic tape form, a change which has had the effect of reducing the overall cost per project registered. SSIE has also developed and imple-



mented a system of machine-assisted indexing which has measurably reduced unit indexing costs. Both improvements have had the effect of facilitating the entry of projects into the system.

Further improvements in the system are still required, however, as the GAO report makes clear. Greater attention needs to be paid to obtaining complete project funding information from Federal agencies, for example, and coverage of research in the private sector by SSIE is still limited by a lack of the resources necessary to encourage registration. More computer storage capacity also would be required if SSIE were to maintain the recommended two complete fiscal years of information on active file in addition to the data registered in the current year. These improvements must, of necessity, continue to be deferred. Moreover, the current budget request does not include funds which would be necessary to improve the comprehensiveness of the SSIE data base through a mechanism such as mandatory input, as was recommended by GAO in the area of materials research. This is a step which SSIE believes would significantly enhance both the value of the data base and the rate at which new users would be attracted to the system.





TABLE I

SSIE Processing Workload and Sources of Revenue

	Actual FY 1973	Actual FY 1974	Actual FY 1975	Estimated Actual FY 1976	Projected FY 1977	Projected FY 1978
<u>Processing Workload</u>						
Input Volume <sup>1/</sup>	85,530	102,368	125,531	109,500 <sup>2/</sup>	128,000	134,000
Output						
Report Volume <sup>3/</sup>	348,600	605,300	671,000	951,900	1,100,000	1,285,000
Contracts						
- No. active during FY	15	13	18	20	21	22
- Average \$ cost (\$000)	\$ 14.2	\$ 8.5	\$ 27.5	\$ 41.2	\$ 44.1	\$ 47.9
<u>Sources of Revenue &amp; Total Costs</u>						
Federal Support (\$000)	\$1,600.0	\$1,695.0	\$1,805.0	\$1,940.0	\$1,974.0 <sup>4/</sup>	\$2,013.0
User Revenues (\$000)						
Search Products	213.9	305.9	339.0	364.0	400.1	446.0
Contract Services <sup>5/</sup>	216.3	110.4	495.0	824.6	925.4	1,054.0
Total User Revenues	430.2	416.3	834.0	1,188.6	1,325.5	1,500.0
Total Costs of Operation	\$2,030.2	\$2,111.3	\$2,639.0	\$3,128.6	\$3,299.5	\$3,513.0
<u>Distribution of Total Costs</u>						
Federal Support	79%	80%	68%	62%	60%	57%
User Revenues	21%	20%	32%	38%	40%	43%

<sup>1/</sup> Notices of Research Projects processed.

<sup>2/</sup> Does not include 22,000 projects received too late for processing during FY 1976. It is expected that most of these, along with regular input, will be processed during the Transition Quarter.

<sup>3/</sup> Notices of Research Projects disseminated in the form of SSIE search products.

<sup>4/</sup> Includes anticipated supplemental appropriation request of \$74,000 to offset the impact on input operations of an expected 5.16% October 1977 pay increase comparable to the General Schedule.

<sup>5/</sup> Includes contract support to the National Cancer Institute under the International Cancer Research Data Bank program beginning in FY 1975.



MUSEUM PROGRAMS AND RELATED RESEARCH  
(SPECIAL FOREIGN CURRENCY PROGRAM)

1976 Appropriation.....	\$500,000
Transition Quarter Appropriation.....	\$0
1977 Appropriation.....	\$3,481,000
1978 Estimate:	
Within Target Request.....	\$3,100,000
Additional Over Target.....	1,400,000
Total.....	\$4,500,000

An appropriation of \$4,500,000 equivalent in foreign currencies which have been determined by the Treasury Department to be excess to normal needs of the United States, is requested for FY 1978. This appropriation will be used to continue a program of grants to United States institutions for field research in the program areas listed below in those countries where excess local currencies are available. In addition, it will allow payment of \$1,000,000 equivalent in excess Egyptian pounds (the last of four equal annual contributions) for the salvage of archeological sites on the Island of Philae.

Obligation of Funds by Program Area

(\$1,000s)

	<u>FY 1976/TQ</u> <u>Estimate</u>	<u>FY 1977</u> <u>Estimate</u>	<u>FY 1978</u> <u>Estimate</u>
Archeology and Related Disciplines	\$919	\$1,547	\$2,549
Systematic and Environmental Biology	197	578	563
Astrophysics and Earth Sciences	233	151	270
Museum Programs	23	232	149
Grant Administration	1	10	20
Philae Temple Preservation <sup>/1</sup>	-	1,000	1,000
Totals	\$1,373 <sup>/2</sup>	\$3,518 <sup>/3</sup>	\$4,551 <sup>/4</sup>

Commitment of Funds by Country

	<u>FY 1976/TQ</u> <u>Estimate</u>	<u>FY 1977</u> <u>Estimate</u>	<u>FY 1978</u> <u>Estimate</u>
Burma	\$0.4	-	-
Egypt	432	\$1,707 <sup>/1</sup>	\$2,523 <sup>/1</sup>
India	366	586	1,527
Pakistan	71	409	501
Poland	235	232	-
Tunisia	269	584	-
Totals	\$1,373.4 <sup>/2</sup>	\$3,518 <sup>/3</sup>	\$4,551 <sup>/4</sup>

<sup>/1</sup> U.S. contribution of \$1,000,000 equivalent in Egyptian pounds for the preservation of the temples on the Island of Philae.

<sup>/2</sup> Estimated obligations for FY 1976 and the transition quarter will employ \$500,000 appropriation plus an estimated \$334,000 from FY 1975 carryover and \$539,000 recovered from prior years' obligations by deobligation during FY 1976.

<sup>/3</sup> Estimated obligations for FY 1977 will employ the appropriation of \$3,481,000 plus an estimated \$37,000 to be recovered from prior years' obligations during FY 1977.

<sup>/4</sup> Estimated obligations for FY 1978 will employ requested appropriation plus an estimated \$51,000 to be recovered from prior years' obligations during FY 1978.



The Smithsonian Foreign Currency Program (SFCP) is the principal source of excess currency support for basic research carried out by United States institutions in the excess currency nations.

Since FY 1976 the Smithsonian Program has awarded approximately \$29,000,000 equivalent in "excess" foreign currencies to U.S. institutions of higher learning. These awards have resulted in more than 900 publications and contributed to 97 research collections. In FY 1976, 212 American scholars from 49 U.S. institutions participated in 42 projects, all of which were continuations of ongoing research supported by the SFCP in previous years. In FY 1977, support will be awarded to an estimated 60 projects. Recent outstanding research results include:

--The discovery in Pakistan of new and more complete fossil specimens of the earliest recognizable human ancestor, Ramapithecus. The studies of these fossils will allow scientists to make more informed choices for the reasons of the divergence of the hominids from the apes.

--The discovery and mapping of extensive reservoirs of ground water in the Western Desert of Egypt. The reconstruction of the history of the changes in the water resources of the Western Desert will provide data useful for the future exploitation of these resources for agriculture.

--The documentation by film of a Vedic sacrifice in India, one of the most complex and ancient rituals of mankind. After a continuous tradition of performance for over 3,000 years, this recorded performance may be the last celebration because of the disappearance of qualified Brahmin scholars.

In addition to presenting valuable research opportunities to U.S. institutions the Smithsonian grants program also strengthens the research and training activities of collaborating institutions and scholars in the host country. The enduring professional ties, which result from such joint efforts and scholarly exchange, moreover, make important contributions to cultural relations between the United States and other nations.

New developments in international scientific and cultural organizations are opening new areas for cooperative programs supported by the Special Foreign Currency Program. The newly established Indo-U.S. Subcommissions on Education and Culture and Science and Technology have set forth new priorities for research, which will stimulate new cooperative programs in India. A newly-reorganized American Institute of Pakistan Studies will encourage research by American scholars in a broad range of disciplines. In addition the American Association of Museums, in cooperation with the International Council of Museums, is planning a wide-ranging program of international cooperation in the museum professional fields.

Of the \$3,500,000 requested for research in FY 1978, approximately \$1,000,000 would support new research and \$2,500,000 would support ongoing projects. Prominent among institutions which will receive a major share of these funds are two United States consortia--the American Institute of Indian Studies (AIIS) and the American Research Center in Egypt (ARCE). In an effort to promote program stability, certain long-term projects will be funded for two-year periods during FY 1978. This will insure, for instance, the continuity of the American Institute of Indian Studies fellowship program which provides the major American scholarship effort in India. The Program will also multiyear fund the administration of the American Research Center in Egypt and some of its specific programs which have demonstrated successful results over the years.



Special Foreign Currency Program appropriations are an advantageous and unique source of research monies. They do not require new appropriations of tax dollars and do not add significantly to the President's budget total because the Commodity Credit Corporation reduces its appropriation by an amount equal to the amount of foreign currencies expended. Furthermore, delay in the use of the "excess" accounts means continuing losses to the United States Treasury as these accounts lose value through inflation and devaluation.





## RESTORATION AND RENOVATION OF BUILDINGS

1976 Appropriation.....	\$1,192,000
Transition Quarter Appropriation....	\$400,000
1977 Appropriation.....	\$2,950,000
1978 Estimate:	
Within Target Request.....	\$9,420,000
Additional Over Target.....	<u>1,355,000</u>
Total.....	\$10,775,000

This account is used to fund major repairs, alterations, and improvements of a long-term nature and benefit. From time to time, it is used also for construction of major additions to existing facilities or for minor new temporary or permanent buildings or other facilities. Facilities planning and studies and other related expenses may be funded from this account. Projects undertaken are in support of research, care, and protection of collections; public accommodation and safety; and maintenance and development of a valuable physical plant and natural areas. Work is accomplished primarily by contract. There are occasional projects not lending themselves to contract. For example, suitable contractors cannot be located or their estimates are exorbitant in relationship to the proposed job. In such cases, accomplishment of the work by other means, such as the purchase with this appropriation of supplies, materials, and equipment and the use of inhouse or temporary labor, is the most cost-effective solution.

The FY 1978 appropriation will be used for the following plan of work.

<u>Project</u>	<u>Within Target</u>
1. Study Center and Library Addition to the History and Technology Museum	\$7,100,000
2. General repairs and improvements	597,000
3. South Garden and Smithsonian Building east entrance renovation	275,000
4. History and Technology Building terrace repairs	250,000
5. Renwick Gallery exterior repairs	100,000
6. Building equipment monitoring systems	250,000
7. Handicapped access and correction of hazardous conditions	322,000
8. Fire detection and control systems	176,000
9. Arts and Industries Building roof replacement	<u>350,000</u>
Total	\$9,420,000

<u>Project</u>	<u>Over Target</u>
1. Chesapeake Bay Center laboratory addition	\$280,000
2. Mt. Hopkins Observatory dormitory and water system	440,000
3. Fine Arts and Portrait Galleries Building roof replacement	200,000
4. Hirshhorn Sculpture Garden lighting and landscaping	110,000
5. Silver Hill Facility improvements	175,000
6. Arts and Industries Building exterior repairs	<u>150,000</u>
Total	\$1,355,000



Details on these projects appear in the following justifications.

### Within Target

#### 1. Study Center and Library Addition (\$7,100,000).

An amount of \$7,100,000 is requested to build a sixth floor addition to the National Museum of History and Technology Building. This is required to provide necessary additional space for the museum's library and for the collections of archival material and graphic Americana.

The new facility will accommodate the museum's present library, now widely scattered within the museum and in inaccessible storage space. It will provide special study and conference facilities for visiting scholars, students, staff, and the public. It is required to permit this museum to fulfill its most fundamental mission--making its collections accessible for use in the service of history.

The building which houses the National Museum of History and Technology was completed at a cost of \$34 million, and opened to the public in 1964. The building has five floors and a basement totaling 684,000 square feet. The first three floors and a portion of the basement are devoted to exhibits. The fourth and fifth floors contain space for reference collections, staff offices, and the present library. In the basement are located additional reference collection storage areas, receiving and shipping facilities, shops, and laboratories. It also contains the Photographic Services and the Conservation-Analytical Laboratories, both of which serve the entire Smithsonian Institution, and a public cafeteria.

The National Museum of History and Technology differs from any other museum or institution in the world. It is the national museum of American history. Its basic resources are its collections of some 16 million objects and its staff of 45 curators and historians and 53 technicians and specialists plus exhibits, administrative, and other support personnel. It is the most important history museum in the world and excels, both in its collections and in the professional leadership of its staff, other specialized museums which lack the diversity of its subject interests and holdings and its general concern with American history.

The museum's collections of artifacts of history are unparalleled in any other institution in the world. Approximately half are related to the history of science, industry, and technology--a mainstream of American history. The London Times once noted that "The Museum of History and Technology of the Smithsonian Institution in Washington now contains the largest concentration of young and able specialist historians of science in the western world..." The collections of objects and the staff of curator historians are supplemented with essential holdings of library and archival materials which due to lack of space remain difficult to use. Two examples of archives materials are 225,000 items in the collection of early illustrated trade catalogues and an estimated 1.5 million pieces in the Collection of Business Americana.

The success of the National Museum of History and Technology as a public museum, as a resource for aid to other museums, and as a growing influence in historical interpretation, rests in large measure upon its library and archival collections. These are used by the curators, by their professional colleagues





from other museums and universities, and by students and writers. They are used to respond to public inquiries, to authenticate exhibits, to document objects, to design classroom learning aids, to develop museum education programs, and to promote communication and creative discussion among museum professionals and other scholars.

It is essential to preserve these collections in accessible order and to provide study facilities for the researchers who use them. Additional space is required to accommodate the archival material and reduce the waste of time and effort in consulting it in inaccessible storage.

When the museum was projected in 1957, it was planned to be nearly one-third larger than the building finally built. Spaces originally designed for all uses including the library were reduced in proportion. Space planned for the use of students and visiting scholars was virtually eliminated. Since then, priority needs for expanded conservation facilities and for growing collections of objects have prevented the proper enlargement of library and study space required to accommodate very significant archival and library acquisitions, or the space to perform research on them. The museum has been able to preserve some very fine acquisitions only by housing them temporarily and inadequately in space planned and required for other uses such as closed exhibition halls.

Such has been the case with the temporary housing of the Dibner Library. This large gift collection of rare books, incunabula, and manuscripts relating to the history of science and technology, letters and portraits of scientists, scientific medals and instruments formerly formed the major holdings of the Burndy Library in Norwalk, Connecticut, a facility established in 1936 by Bern Dibner, inventor, industrialist, and bibliophile. The nucleus of this collection consists of the original books and pamphlets which proclaimed new truths or hypotheses, redirected scientific thought, brought understanding of natural laws, and at times introduced technological change.

Funding already appropriated to the Institution totaling \$275,000 will allow the completion in FY 1977 of plans and specifications for this study center and library addition.

## 2. General Repairs and Improvements (\$597,000).

The Smithsonian (exclusive of the National Zoological Park separately presented) has 11 major museum buildings (ranging in age from new to well over 100 years old) containing some 2.5 million net square feet and having a replacement value of several hundred million dollars. It also includes in its space inventory (not including rental properties) many lesser structures containing about 0.5 million square feet used for research, collections management, and administrative purposes. Several thousand acres of land are dedicated to research, conservation, and education. Heavy public use of these facilities, general deterioration because of age and weathering, visitor and staff safety requirements, and the need to make improvements to keep pace with program changes create a demand for regular, annual attention beyond the capability of inhouse maintenance staffs.

Specific, generally major, projects are budgeted in this appropriation under individual building or other headings. There is an urgent need, however, for substantial annual funding for planning, engineering, repair, and improvement response to other projects including those that arise unexpectedly. An appropriation of \$597,000 (about \$0.20 a square foot not including grounds areas) is requested for FY 1978.





These funds will be used for items such as replacement of worn or obsolete air conditioning units, sewer lines, pumps, valves, or electric switchgear, repair of windows, sash, and exterior facade, architectural-engineering services, storm window installation, lightning protection, and other items necessary to ensure functioning of the environmental systems within facilities.

5. South Garden and Smithsonian Building East Entrance Renovation (\$275,000).

During 1976 the temporary and deteriorated buildings in the area adjacent to and south of the Smithsonian Institution Building were removed and a Victorian garden was constructed to provide an aesthetically pleasing quiet area and horticultural exhibit of a variety of unique and valuable plantings. An appropriation of \$275,000 is requested in FY 1978 to continue the development of this area to include the garden area adjacent to the east entrance to the Smithsonian Institution Building and to provide a decorative security fence around the perimeter of the garden to protect sensitive and valuable plant specimens. All the landscaping, planting, and fencing are being planned to harmonize with the adjacent Victorian structures.

4. History and Technology Building Terrace Repairs (\$250,000).

An amount of \$250,000 is required to continue a phased program (estimated to cost \$800,000) of repairing the terrace of the History and Technology Building, which serves both as a pedestrian walkway around the building and as the roof to interior basement work, machinery, and storage space. Apparent original construction deficiencies have led to general deterioration of the waterproofing under the paving material and consequent extensive leakage into work and collection areas. An amount of \$100,000 was appropriated for this purpose in FY 1977.

5. Renwick Gallery Exterior Repairs (\$100,000).

An engineering survey determined that the restored Renwick Gallery facade has been severely damaged by water entry through unprotected surfaces, mortar joints, deteriorated building sealants, and cracks caused by temperature changes. Extensive repairs are required for appearance purposes, to guard against the hazards of falling stonework, and to protect the interior of the building. The total repair job is estimated at \$450,000 of which \$200,000 was provided in the FY 1977 budget to accomplish the most urgent work. A further \$100,000 is requested for FY 1978 to continue this project.

6. Building Equipment Monitoring Systems (\$250,000).

Smithsonian buildings contain a vast array of pumps, chillers, condensers, fans, airconditioning, dehumidifying, and other complex and costly mechanical equipment. Monitoring of this equipment's safe, efficient, and economical (increasingly important as utility costs steadily rise) operation is done currently on a tour basis involving personal inspection by journeyman-level mechanics. About 47 man-years of effort (at about \$12,000 a man-year) are expended with results that vary depending on the care taken in observation and recording of results. Available manpower is almost totally consumed with inspections and emergency repairs. Although preventive maintenance schedules have been prepared in detail on much of this equipment, very little such work can now be performed. Equipment failures with potentially serious consequences for building and collection safety are becoming more frequent.



Industry systems now exist that can be installed in the Institution to monitor operating equipment by sensors and report results electronically to central control panels. The installation of such systems would reduce by 60 percent the number of watch engineers. This savings of 29 man-years could be reapplied to preventive maintenance work. Such a system is estimated to cost \$1,000,000 for buildings on the Mall. Funding of \$200,000 was provided in the FY 1977 budget for the first phase of this installation. Additional funding of \$250,000 is included in the FY 1978 appropriation request. Manpower savings will begin to be realized after this second phase.

7. Handicapped Access and Correction of Hazardous Conditions (\$322,000).

Many of the Smithsonian Institution buildings and facilities in the Washington Metropolitan area were designed and constructed before the development of contemporary standards for handicapped access and public safety. As a result, the buildings require modifications to eliminate or mitigate existing architectural barriers and hazardous conditions. The modifications required would include such things as providing adequate building exits, installing elevators, lifts or ramps, renovating restroom facilities, providing access to and wheelchair spaces within auditoriums, eliminating slippery walking surfaces, correcting fall hazards from parapet walls or pedestals, installing guard railings, and providing adequate exit capacity. Funding of \$175,000 was appropriated for these needs in FY 1977. An additional appropriation of \$322,000 is requested in FY 1978.

8. Fire Detection and Control Systems (\$176,000).

Fire engineering surveys have been conducted in all major facilities identifying specific needs for fire detection and control systems. Such systems are presently lacking in many public areas and should be installed for the protection of visitors and exhibits. Similar safeguards are needed in areas where museum collections are housed and where research by staff and visiting students and scholars takes place. Other fire protection needs include the addition of booster pumps to give adequate water pressure and the installation of fire doors. An amount of \$250,000 was provided in FY 1977 for these needs. Additional funding of \$176,000 is sought in FY 1978 to continue a phased program.

9. Arts and Industries Building Roof Replacement (\$350,000).

About \$5,500,000 have been appropriated for the renovation and restoration of the historic 1879 Arts and Industries Building. Major improvements include installing heating, ventilating, and airconditioning systems; replacing obsolete, inadequate, and potentially hazardous electrical and utilities systems; installing additional restrooms; recreating the original appearance of the rotunda and four major exhibition halls; providing new entrances to the building for public safety and accessibility; and other renovations.

About \$2,500,000 of additional work remains to be done to complete the renovation and to protect work already accomplished. Much of this work involves the exterior of the building and is necessary to ensure water-tightness and insulation to save on utility consumption. The FY 1977 budget provided \$950,000 primarily to repair and replace the roof which has deteriorated badly. Temporary repairs have been made to get through the Bicentennial period, but a complete, permanent job is needed to give long-term protection to the building and its contents. A further \$350,000 for roof replacement to complete the job is included in the FY 1978 budget.





## Over Target

### 1. Chesapeake Bay Center Laboratory Addition (\$280,000).

FY 1977 funds will be used to add a laboratory wing to the present administration and research building at the Chesapeake Bay Center. Funding of \$280,000 is required in FY 1978 to purchase and install specialized laboratory equipment and furnishings, laboratory benches, cabinets, exhaust hoods and systems, cold room equipment, and specialized laboratory instruments and equipment required to support the testing and study programs. Site improvements including a driveway, parking lot, and well and septic systems are also required.

### 2. Mt. Hopkins Observatory Dormitory and Water System (\$440,000).

For several years, the Smithsonian Astrophysical Observatory has been following a phased plan of physical site improvements to its Mt. Hopkins, Arizona, Observatory. This includes work to provide adequate and safe facilities for staff and visitors. An appropriation of \$440,000 is required in FY 1978 to continue this program. This funding amount would be used to add a dormitory/dining complex to serve staff and visiting scientists and technicians and to install a water supply system to satisfy drinking, sanitary, and fire protection needs. The new water system will eliminate the need to bring water in by trucks. It is expected that FY 1977 funds appropriated for the water system may be reprogrammed to other more urgent requirements.

### 3. Fine Arts and Portrait Galleries Building Roof Replacement (\$200,000).

The effects of the weather and atmosphere have caused deterioration of the asphaltic composition built-up roofing on the Fine Arts and Portrait Galleries Building. The resulting roof leaks appear more frequently posing a potential threat to the paintings, sculpture, and artifacts exhibited and stored in this building. The existing roof has lasted well beyond its projected life and should be replaced before serious damage to the building or contents occurs. Replacement of the roofing will cost \$200,000.

### 4. Hirshhorn Sculpture Garden Lighting and Landscaping (\$110,000).

Currently the lighting level in the Hirshhorn Sculpture Garden is adequate only for security purposes. In keeping with the practice of allowing evening visitation whenever practical, it is proposed to install new lighting fixtures to provide a safe and adequate level of illumination to allow evening visitors to view the sculpture garden exhibits. The new lighting would be developed to ensure low maintenance and energy costs. Additionally, carefully coordinated landscaping improvements will be installed to enhance the exhibits and improve the appearance of the building and sculpture garden as well as improve visitor comfort and safety. Funding of \$110,000 is sought for this work.

### 5. Silver Hill Facility Improvements (\$175,000).

The Silver Hill facility is primarily a storage and object restoration facility. It consists of 24 steel frame buildings on 21 acres of land and contains approximately 288,000 square feet of storage area. The development of this facility over the years has been on an as needed basis with many buildings changing use and/or function several times. As a result, many buildings have inadequate environmental, safety, fire protection, electrical,





and sanitary systems. To provide a safe and healthful environment for employees at this facility the locker and restrooms need to be brought up to acceptable health standards, dust collecting and venting should be provided in the shops, paint spray booth modifications are required, and electrical service modifications are necessary. An appropriation of \$175,000 is requested for this work.

6. Arts and Industries Building Exterior Repairs (\$150,000).

Many elements of the facade and appurtenances of the Arts and Industries Building are in need of restoration or renovation. Funds in the amount of \$150,000 are required for such items as window glazing and sash repair or replacement, masonry painting, granite resurfacing, downspouts and drains, painting, and other necessary repairs and improvements.



## CONSTRUCTION AND IMPROVEMENTS, NATIONAL ZOOLOGICAL PARK

1976 Appropriation.....	\$8,390,000
Transition Quarter Appropriation.....	\$1,440,000
1977 Appropriation.....	\$6,580,000
1978 Estimate:	
Within Target Request.....	\$1,000,000
Additional Over Target.....	<u>5,000,000</u>
Total.....	\$6,000,000

This appropriation is used to fund repairs, alterations and improvements to existing facilities including exhibits; to prepare plans and specifications for construction; and to perform renovations, restorations, and new construction implementing the Master Plan approved by the Commission of Fine Arts and the National Capital Planning Commission in FY 1973.

The requested FY 1978 appropriation will be applied as follows:

### Within Target

Renovation and Repair of Buildings	
National Zoological Park	\$300,000
Front Royal Conservation and Research Center	<u>700,000</u>
	\$1,000,000

### Over Target

Central Area (Ape House and Reptile House)	\$5,000,000
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## Background

The National Zoological Park was established in 1890 under the Board of Regents of the Smithsonian Institution, who are authorized to "administer and improve" the Zoo for "the advancement of science and the instruction and recreation of the people" (20 U.S.C. 81). The Zoo has two locations. Exhibition and education functions have been centered since 1890 on some 150 acres in Washington, D.C.'s Rock Creek Valley. Complementary animal conservation, research, and breeding functions (to be done in collaboration with other zoos) are now being developed on about 3,000 acres near Front Royal, Virginia. The Zoological Park has been undergoing major renovation since 1974. With the FY 1978 budget, the last major area of the Park will be started consisting of the ape house, a monkey island, and renovation of the small mammal and reptile houses. Remaining projects for future years, as shown on page D-10 are an aquatic habitat exhibit, renovation of the Holt House, which is an historic building on Zoo land, and completion of the multi-level parking facility. Other projects previously included in the Master Development Plan will be reconsidered for future years. In lieu thereof, less costly renovation work will be accomplished and increased funding attention will be given to the important Conservation and Research Center.

Details on FY 1978 projects are provided in the following sections:



### Renovation and Repair of Buildings (\$1,000,000)

An appropriation of \$300,000 is requested to renovate the central gas-fired heating plant at the National Zoological Park and to continue priority improvements and repairs to plumbing, electrical and heating systems, roofs, roads, and walks. The existing heating plant has been inundated several times in the last few years due to flash flooding in Rock Creek Valley. It is essential that boilers be moved and raised to a higher elevation to avoid any possibility of heat shutdown which could result in the loss of valuable animals, birds, and reptiles. A nearby building will be renovated, new boilers installed, and flood protection provided for the building. A new fuel oil storage tank will be installed as a standby for one boiler in the event of shortages in natural gas.

An appropriation of \$700,000 is requested for the Conservation and Research Center at Front Royal, Virginia. The appropriation is required to rebuild and rehabilitate utility systems to overcome years of deterioration and to update water treatment and sewage disposal systems to comply with regulations imposed by the State of Virginia and the Environmental Protection Agency under the Water Pollution Control Act (PL 92-500) and the Safe Drinking Water Act (PL 93-523). Other priority rehabilitation work includes repair of animal barns, enclosures, construction of a new hoofed stock barn, renovation of a building for use as a veterinarian clinic, resurfacing of roads, and removal of all deteriorated and unsafe structures. This work will essentially complete the upgrading of existing facilities and prepare the way for future construction of a visitors center and animal handling facilities.

### Central Area (\$5,000,000).

An appropriation of \$5,000,000 is requested to start redevelopment of the central area of the National Zoological Park. Planning funds for this project were appropriated in FY 1975 and the transition quarter. These construction funds will provide a new modern exhibit facility for gorillas and orangutans with both inside and outside moated yards. The facility will be designed to exhibit apes in family groups and in natural appearing enclosures. The new facility is needed to ensure breeding of both endangered ape species and to eliminate the need for the old inadequate and cramped space in the small mammal house now available for apes. In addition, the appropriation will provide funds to rehabilitate the 1930 reptile house which is badly deteriorated with inadequate and antiquated reptile exhibits. Since the building itself is structurally sound and suitable for renovation construction of a totally new facility is not required. The basement of the building will be renovated for use as a nocturnal animal exhibit. With the use of red lights simulating nighttime, nocturnal animals can be viewed in action rather than asleep as they are during daylight. Renovation will include new cages, new walls, new lighting, plumbing, and air conditioning. In FY 1979, an additional appropriation of \$3,000,000 will be requested to complete central area facilities including a monkey island and renovation of the small mammal house.





(1,000s)

National Zoological Park  
Construction Program  
1974-1984

September 1976

Activity	Fiscal Years												Total
	1974	1975	1976	TQ	1977	1978	1979	1980	1981	1982	1983	1984	
I. Master Plan													
Lion-Tiger Facility	3,000	1/											3,000
Elephant Yards and	160	2,970											3,130
Bird House Plaza													
Education-Administration		2,500											2,500
Building													
General Service and													
Parking Facility	300	2,700	4,000	2/						13,500			20,500
Lower Rock Creek Valley	100	400	2,500										3,000
Beaver Valley Area		80	490	2/	5,840								6,410
Central Area		100		900	2/	5,000	3,000						9,000
Waterfowl Pond Area		20											20
Aquatic Habitats								1,000	12,000				13,000
Holt House Renovations								3,000					3,000
Graphics			100		100								200
Totals	3,560	8,770	7,090	900	5,940	5,000	3,000	4,000	12,000	13,500			63,760
11. NZP Renovations													
	230	650	600	160	440	300	800	400	200	200	200		4,380
111. Conservation Center													
		3/	700	380	200	700	2,000	2,000	800	800	500	500	8,580
Totals	3,790	9,420	8,390	1,440	6,580	6,000	5,800	6,400	13,000	14,500	700	700	76,720

1/ Excludes \$275,000 for planning appropriated in FY 1973.

2/ An additional \$800,000 has been reprogrammed with Congressional approval to the General Service Facility from the Beaver Valley FY 1976 appropriation (\$350,000) and from the Central Area TQ appropriation (\$450,000).

3/ Amount of \$125,000 appropriated in FY 1975 under Restoration and Renovation of Buildings account.



CONSTRUCTION  
MUSEUM SUPPORT FACILITY PLANNING

1976 Appropriation.....	\$0/1
Transition Quarter Appropriation.....	\$0
1977 Appropriation.....	\$0
1978 Estimate:	
Within Target Request.....	\$325,000
Additional Over Target.....	0
Total.....	\$325,000

Public Law 94-98 approved by the President on September 19, 1975, authorizes the Institution to plan for a Museum Support Facility and provides for the appropriation of such sums as may be necessary to carry out that authority.

In FY 1978, the Institution requests an appropriation of \$325,000 to begin the design and to develop specifications for a first stage building to cost approximately \$15,000,000 and to be configured in such a way that it could be enlarged and extended in subsequent years should collections growth require such action.

This facility would house, under optimum conditions for their safeguard and with ready access for their study, the expanding national collections of specimens and artifacts documenting the fields of natural science, American history, technology, and art and release to public usage spaces in the Mall buildings which are presently allocated to storage areas and laboratories for which they were not designed.

The Museum Support Facility would provide greatly needed additional space for support and maintenance services and a laboratory for the training of museum conservators required by the Smithsonian's museums and the nation at large.

The proposed site for this building is 35-acre tract in Suitland, Maryland which has recently been transferred to the Institution by the General Services Administration. Two additional tracts which are in the process of being surplusd by the Department of the Army are expected to be transferred to the Smithsonian's use before the end of calendar year 1976.

Over the last year and a half, the Smithsonian has made a careful internal study of its requirements and retained a consortium of consultants who have assisted the Institution in examining its needs, assessing its current physical facilities, especially the requirements of the National Museum of Natural History, and studied various alternative systems for the management of collection storage. The study resulted in a site development plan and design for the Institution's long-range objectives at Suitland.

This study suggests a first phase construction effort of approximately \$40 million. The Institution has decided to spread this first phase into several stages, thus allowing for a lesser initial financial commitment and extending full development over a longer period. This phasing will provide regular opportunities to review collections growth and reassess space needs.

/1 \$2,500,000 appropriated under this heading for the liquidation of contract authority for the construction of the National Air and Space Museum.



Related to the development of the Museum Support Facility, and essential for its programming, is a collection management study which has been initiated and will be completed in FY 1977. This is aimed at determining more precisely the effectiveness of the Institution's collection management practices and providing a clear projection of future needs.

The Museum Support Facility is a major priority for the Institution, and the recently adopted 20-year exhibits development plan of the Museum of Natural History depends entirely on the availability of facilities in which the major research collections of that museum can be properly housed, thus freeing the space necessary for a reorganization of the Museum's galleries. This action will meet the research needs of the staff and provide a more logical and clearer interpretation of the Museum's irreplaceable resources to the millions of persons who visit it every year.





## IMPACT ON FY 1979 AND SUBSEQUENT YEAR BUDGETS

Except for continued requirements for necessary pay (within-grade and legislated pay increases) funds to support the additional staff requested in the FY 1978 budget, none of the proposed S&E increases (with one exception) create a requirement for further additions to the Salaries and Expenses base or to the other accounts in FY 1979 and subsequent years. The exception pertains to a small amount of planning funds (\$50,000) requested to advance the study effort on the use of the remaining Mall site which P.L. 94-74, approved August 8, 1975, assigned to Smithsonian use. Until program plans are developed, estimates of the cost of their implementation cannot be made. The most likely development, however, appears to be low-cost temporary exhibits on special themes.

There are no requirements inherent in the FY 1978 appropriation requests for the Science Information Exchange, Inc. or for the Special Foreign Currency Program which create the need for higher appropriations in future years.

Within the Restoration and Renovation of Buildings account, there are several projects identified as being phased over several years. While this phasing will continue in FY 1979 and FY 1980, none of the FY 1978 requests create a requirement for higher levels of R&R expenditures in subsequent years. Indeed, one of the projects, building equipment monitoring systems, when completed in about FY 1980, will allow the redirection of significant base manpower from its current equipment inspection schedule to preventive maintenance work.

Other FY 1978 R&R projects, particularly the construction of the sixth floor addition to the History and Technology Building, will add about eight new jobs and \$325,000 to the operating budget by about FY 1980 or 1981, depending on construction completion dates. Of this total, about \$200,000 is nonrecurring. These funds will be used for furnishings, library, custodial, and maintenance services, and for utilities.

Funding sought in the FY 1978 Construction and Improvements, National Zoological Park appropriation is primarily for the development of the Central Area. A further \$3,000,000 will be requested in FY 1979 to provide other new facilities (monkey island and the renovation of the existing small mammal house) in this area. These new and renovated facilities will add four new jobs and \$150,000 to the operating budget in FY 1979 and six new jobs and \$150,000 in about FY 1980. Renovation and repair funds requested in FY 1978 for the Rock Creek and Front Royal facilities will have no significant impact on the operating budget.

Planning funds requested in FY 1978 for the construction of the Museum Support Facility will be followed in FY 1979 or 1980 by a request for the balance of the planning money, estimated at a further \$325,000, or by a planning/construction appropriation request estimated at \$15,000,000. Operating costs will depend on the size and configuration of the completed structure, but by about FY 1982 there would be a requirement for approximately forty-four (44) positions and \$712,000 to serve this new building, including buildings and grounds, custodial, and protection personnel, utilities, supplies, and equipment.





SMITHSONIAN INSTITUTION LIBRARIES



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